

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

AMERICA'S STRENGTH IN TEXTILES.

[Textile Mercury of Manchester.]

While Englishmen dissent from the means the Americans adopt, they cannot but render the tribute of admiration to the splendid enterprise they display in the conquest of the objects they desire. One of the most notable industrial facts of the past ten years has been the rapid extension of cotton spinning and weaving, especially in the cotton-growing States. This has been most remarkable. There has been a rapid transfer of capital from the New England to the Southern States, while the latter themselves have contributed no inconsiderable amount to the purposes of the new industry. The consequence has been a repetition of the phenomena attendant upon the transplantation of the cotton-manufacturing system of this country to America, only that in this case the various stages are being passed through with much greater rapidity. The South now monopolizes the production of the plain and heavier grades of fabrics, leaving New England the lighter fancy and colored goods. Of course, the predominance of Fall River in the production of printing cloths, owing to its long establishment there and its high organization, has not yet been attacked. It is not probable, however, that any further extension of that kind of work will occur in that locality. The results of this successful competition of the South with the North or New England States will be two important ones. The North will be driven to produce classes of goods, both in variety and fineness, for the absorption of which the home market will not suffice. It will therefore seek outlets abroad. The South also will soon overrun the consumptive capacity of the country and will do the same. Both sections are already feeling the pressure of their production impelling them in this direction. Europe, and especially England, has therefore to face the rapidly-approaching contingency of a competition for the neutral markets of the world such as it has never dreamt of before.

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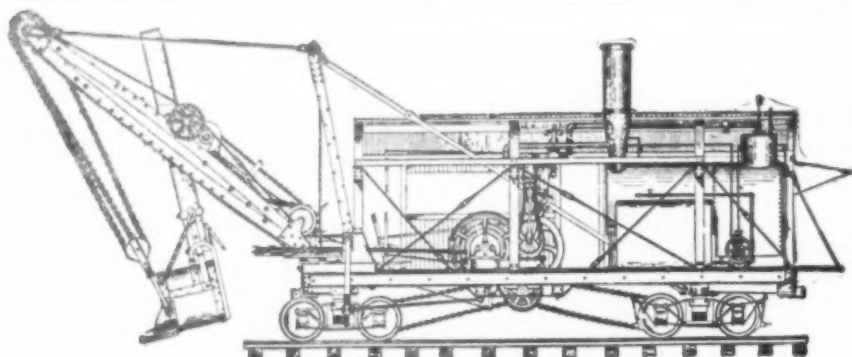
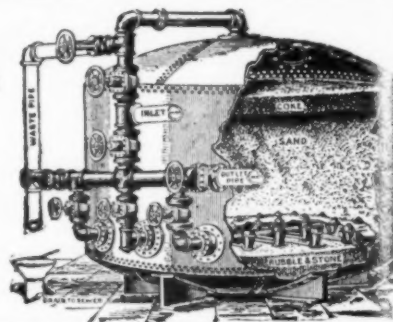
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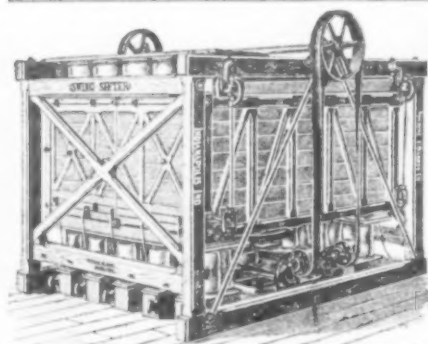
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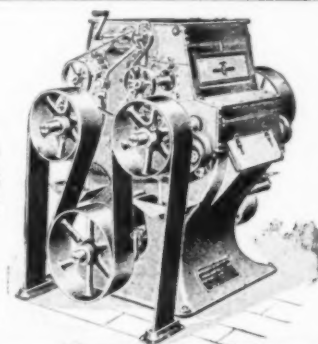
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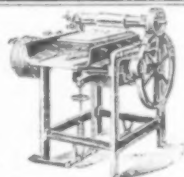


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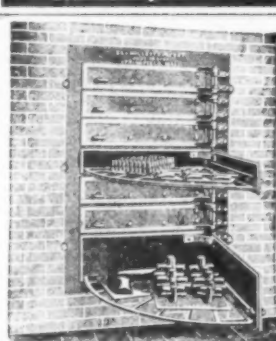
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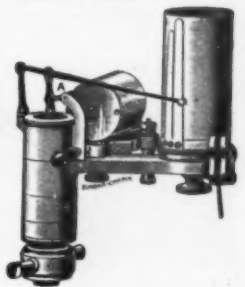
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Alding Co., Inc., J. R., Brooklyn, N. Y.
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Hatter, John C., The (Charleston) & Co.
Crown Dryer Co., Cleveland, O.
Jost, J. G., The (Cincinnati) Co.
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Allington & Curtis Mfg. Co., Saginaw, E. S. Mich.
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Triumph Electric Co., Cincinnati, O.
Western Electrical Supply Co., St. Louis, Mo.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

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Baldwin Locomotive Works, Philadelphia, Pa.

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Spencer & Hall, Baltimore, Md.

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Curran, Jas., The, Cincinnati, O.
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Morse, Williams & Co., Philadelphia, Pa.
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Union Elevator & Machine Co., Chicago, Ill.
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Jeffrey Mfg. Co., Columbus, O.
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Tate, Jones & Co., Pittsburgh, Pa.

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St. Louis Iron & Machine Works, St. Louis, Mo.
Struthers, Wells & Co., Warren, Pa.
Sturtevant Co., B. F., Boston, Mass.
Union Iron Works Co., Selma, Ala.
Valt & Murdoch Iron Works, Charleston, S. C.
Valley Iron Works, Wrentham, Pa.
Viller Mfg. Co., Milwaukee, Wis.
Wetherill, Robert, & Co., Chester, Pa.
Westinghouse Machine Co., Pittsburgh, Pa.
York Mfg. Co., York, Pa.

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Columbus Machine Co., Columbus, O.
Cornell Machine Co., Chicago, Ill.
Fairbanks Co., Baltimore, Md.
Olds Motor Works, Detroit, Mich.
Otto Gas Engine Works, Philadelphia, Pa.
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Westinghouse Machine Co., Pittsburgh, Pa.
York Mfg. Co., York, Pa.

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Aultman Co., The, Canton, O.
Alpha-Photo Engraver Co., Baltimore, Md.
Baltimore Engraving Co., Baltimore, Md.
Bonny James & Co., Pittsburgh, Pa.
Burt Mfg. Co., Akron, O.
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

Exhausters.

Cornell, J. B. & J. M., New York, N. Y.

Expansion Belts.

New Jersey Foundry & Machine Co., Plainfield, N. J.

Fans. (Electric Ceiling, Etc.)

Paragon Fan & Motor Co., New York, N. Y.

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Fans. (Hand.)

Frantz-Gage Mfg. Co., The, Chicago, Ill.

Feed-Water Heaters and Purifiers.

Berryman, Jas., Philadelphia, Pa.
Bonar, James, & Co., Pittsburgh, Pa.
Gem City Boiler Co., Dayton, O.
Green Fuel Economiser Co., Mattawan, N. Y.
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Harley Down Draft Furnace Co., The, Atlanta, Ga.
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Park Mfg. Co., Charlotte, N. C.
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Phoenix Iron Works Co., Meadville, Pa.
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Warren Webster Co., Camden, N. J.

Felling. (Hair.)

Baeder, Adamson & Co., Philadelphia, Pa.

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Bolles Iron & Wire Works, J. E., Detroit, Mich.
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New Jersey Wire Cloth Co., Trenton, N. J.

Fertilizer Machinery. (See Phosphate Mch.)

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Watson, N. A., Erie, Pa.

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Bonar, James, & Co., Pittsburgh, Pa.
Burt Mfg. Co., The, Akron, O.
Flower, Walter L., & Co., St. Louis, Mo.
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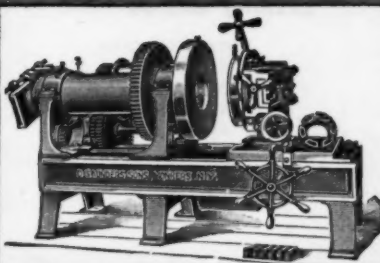
Filter Presses.

Johnson, J. & Co., New York, N. Y.

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Garden City Sand Co., Chicago, Ill.
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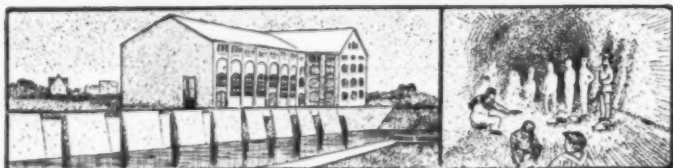
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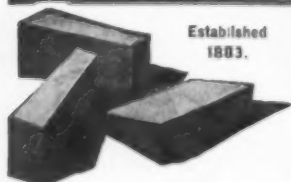
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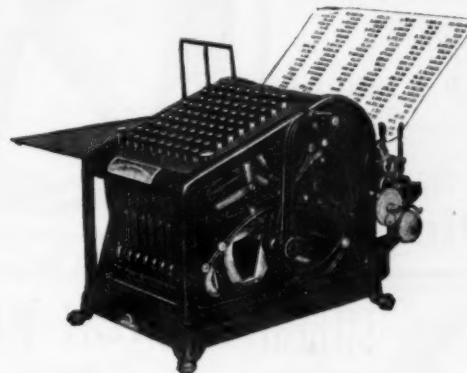
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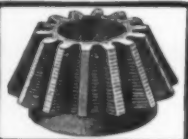
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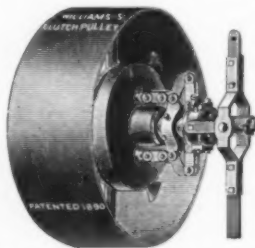
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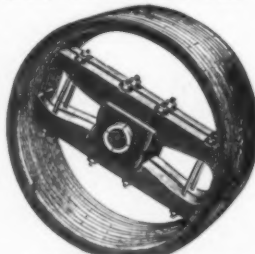
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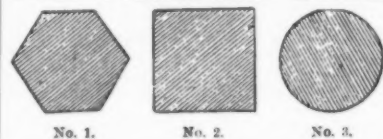
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Atchison Perforated Metal Co., Robert, Chicago, Ill.
Bealy, Chas. H. & Co., Chicago, Ill.
Harrington & King Perforating Co., Chicago, Ill.
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Ludlow-Saylor Wire Co., The, St. Louis, Mo.
Mundt, Charles, & Son, New York, N. Y.
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Alding Co., J. R., Inc., Brooklyn, N. Y.
Aultman Co., The, Canton, O.
Bailey-Lebby Co., The, Charleston, S. C.
Bradley Pulverizer Co., Boston, Mass.
Cameron & Barkerley Co., Charleston, S. C.
Cresson Co., Geo. V., New York, N. Y.
Foss Mfg. Co., Springfield, O.
Link-Belt Engineering Co., Philadelphia, Pa.
McLanahan-Stone Machine Co., Hollidaysburg, Pa.
Raymond Bros. Impact Pulverizer Co., Chicago, Ill.
Sackett, A. J., Baltimore, Md.
Valk & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
West Pulverizing Machine Co., New York, N. Y.
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Phosphor Bronze. (Wire, Rods, Sheets.)
Ryan, J. J., & Co., Chicago, Ill.
Phosphor Bronze Smelting Co., Ltd., Philadelphia, Pa.
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Alabama Con. Coal & Iron Co., Birmingham, Ala.
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New Orleans Wood Preserving Wks., New Orleans, La.
Pillow Blocks.
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Cresson Co., Geo. V., New York, N. Y.
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Glamorgan Pipe & Foundry Co., Lynchburg, Va.
U. S. Cast Iron Pipe & Foundry Co., Chattanooga, Tenn.
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Wolf Co., Fred. W., Chicago, Ill.
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Simmons, John Co., New York, N. Y.
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Sterling Blower & Pipe Mfg. Co., Hartford, Conn.
Pipe. (Spiral Riveted.)
Abendroth & Root Mfg. Co., New York, N. Y.
American Spiral Pipe Works, Chicago, Ill.
Pipe. (Sewer and Culvert.)
Pomona Terra Cotta Co., Pomona, N. C.
Stevens' Sons Co., H., Macon, Ga.
Warner Co., Chas., Wilmington, Del.
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Fairbanks Co., Baltimore, Md.
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Columbus Machine Co., Columbus, O.
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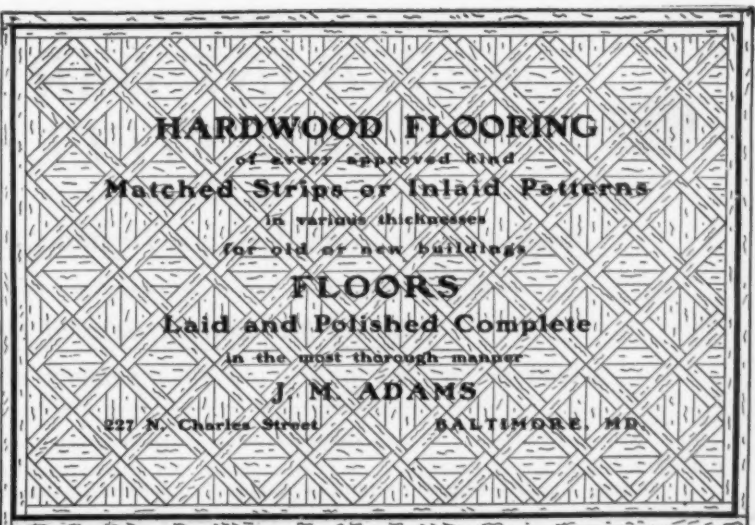
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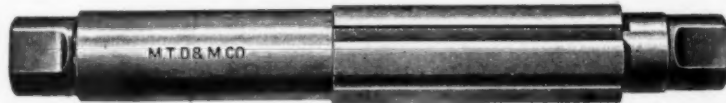
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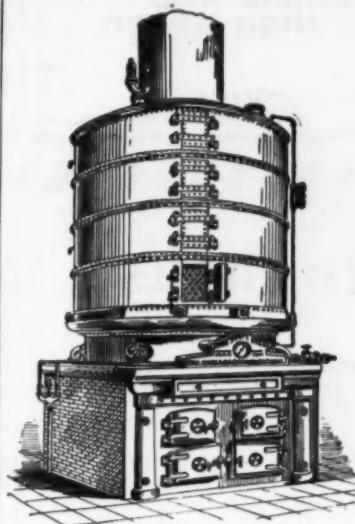
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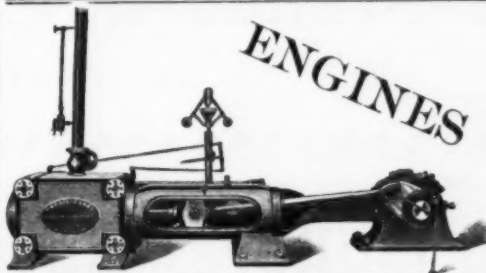
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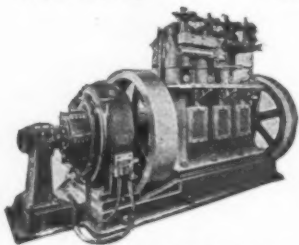
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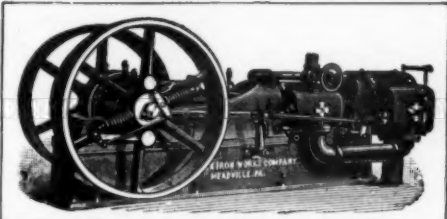
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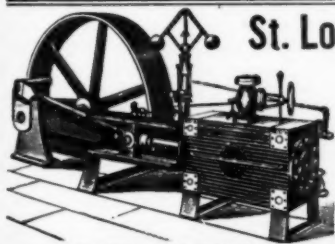
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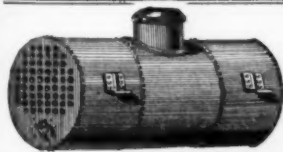
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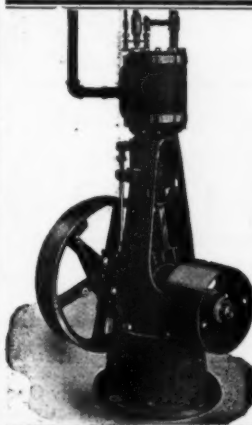
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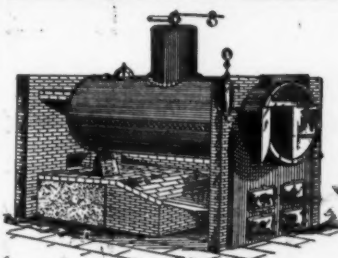
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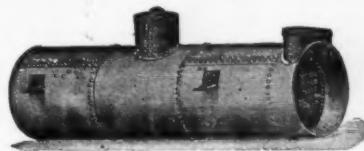
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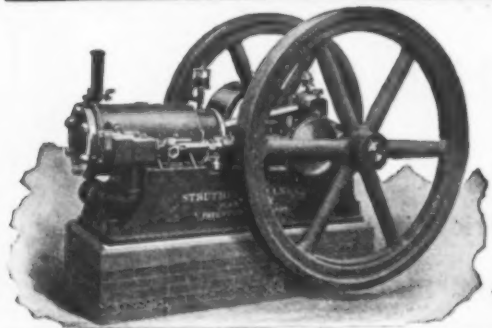
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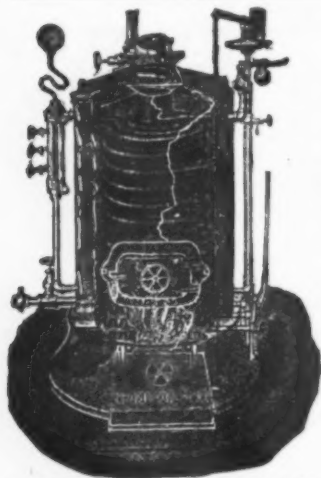
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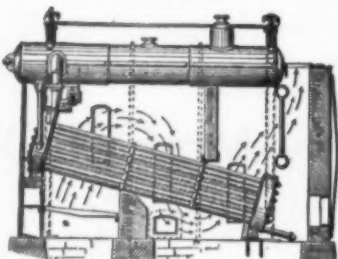
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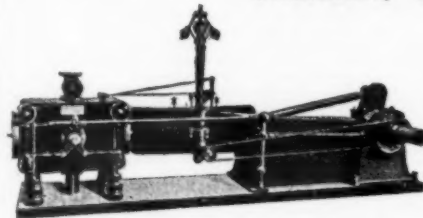
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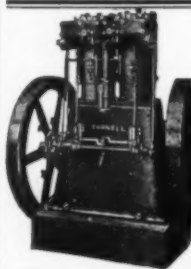


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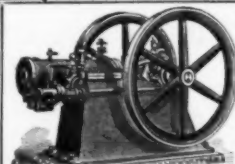
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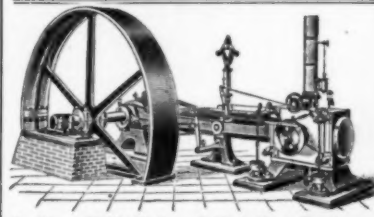
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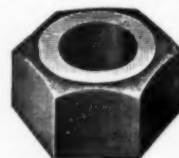
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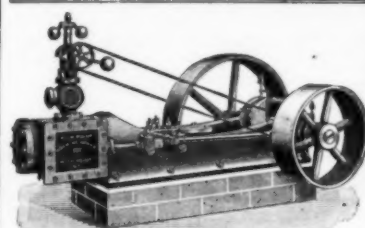
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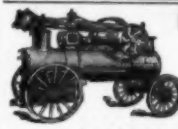
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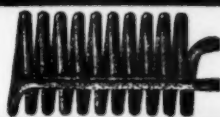
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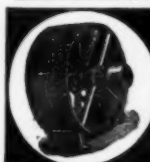
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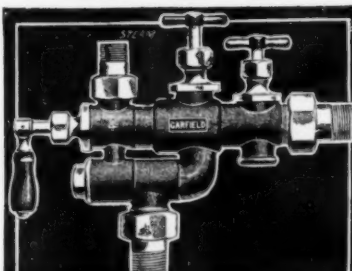
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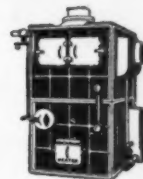
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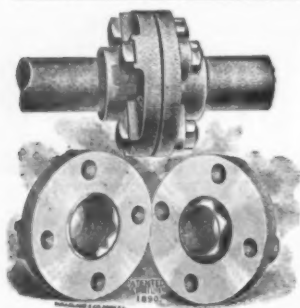
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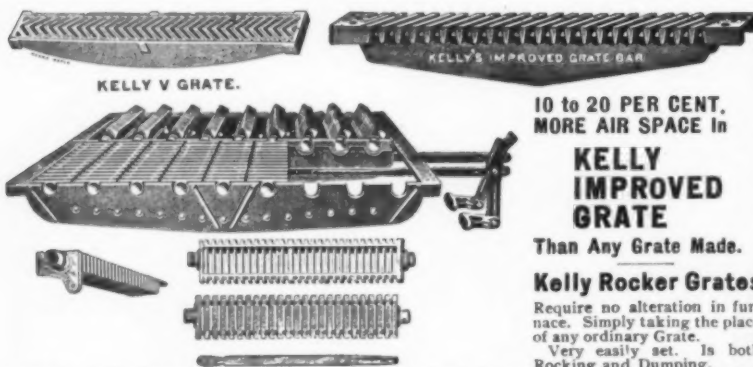
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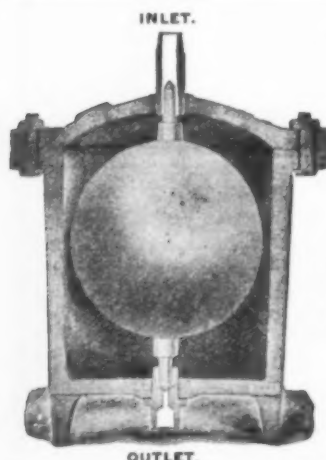
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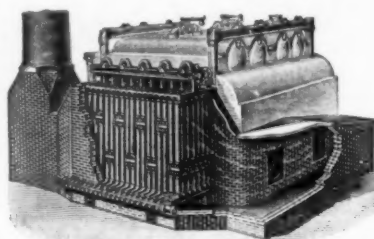
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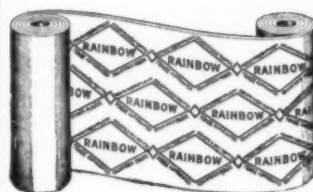
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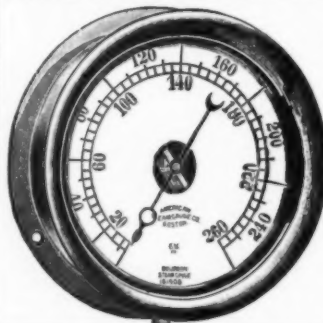
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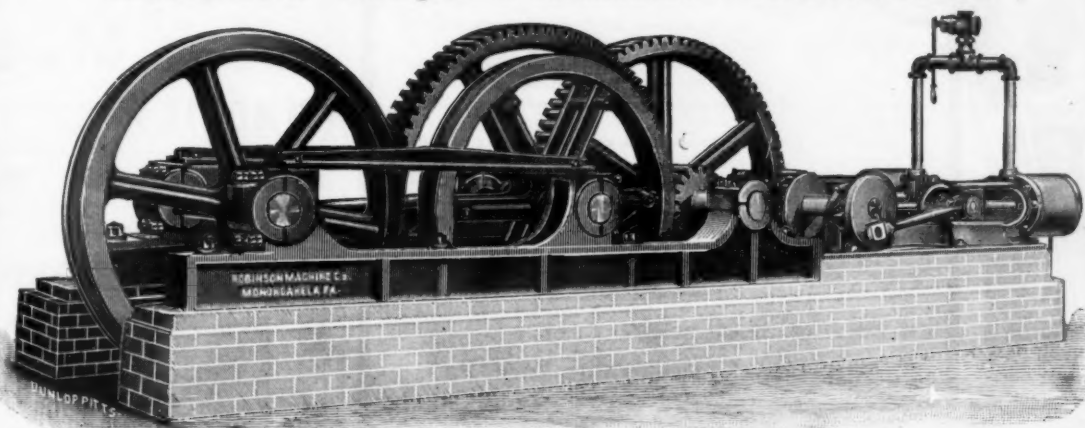
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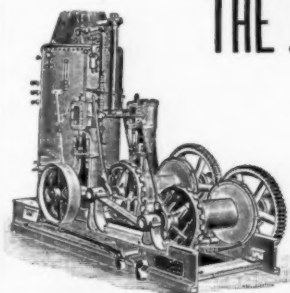
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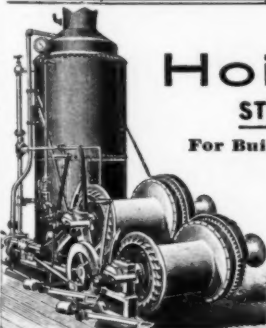
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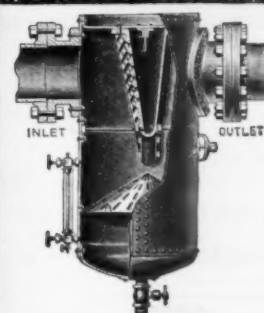
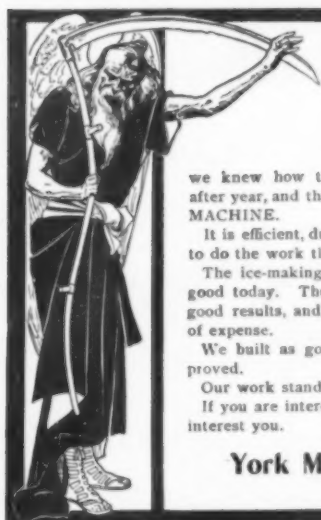


Fig. D, Horizontal.

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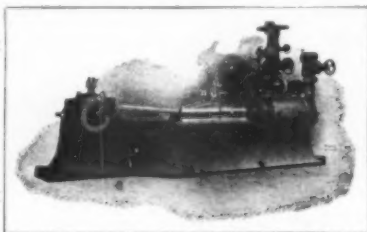
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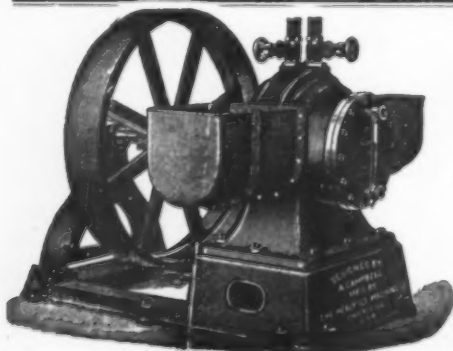
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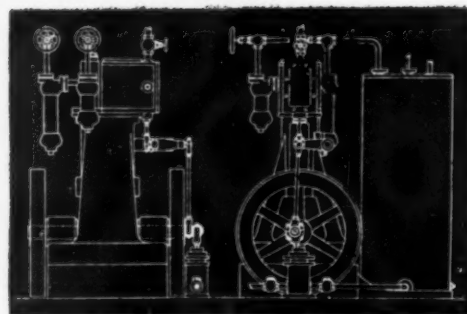
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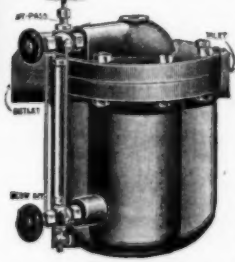
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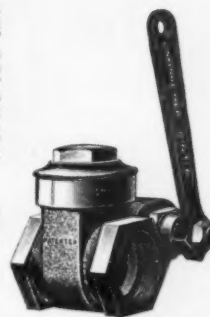
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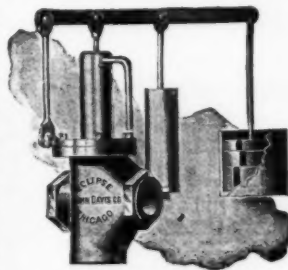
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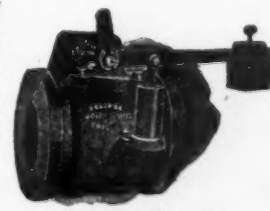
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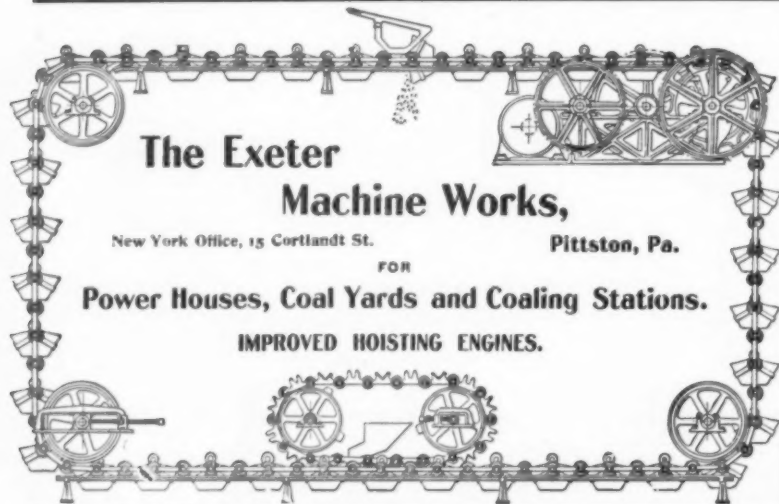
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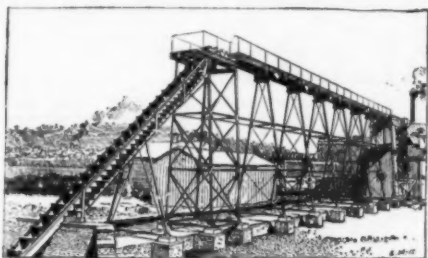
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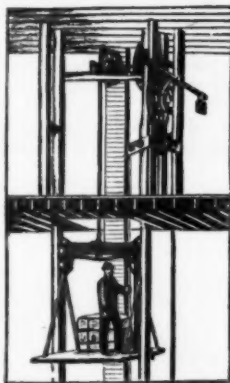
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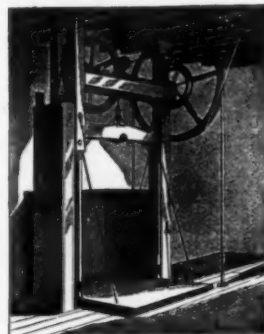
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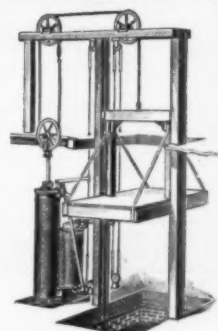
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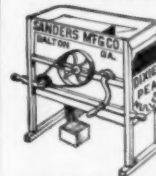
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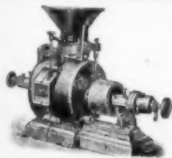
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Important Litigation Relating to Magnesia Covering Patents.

The Kearsbey & Mattison Co., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50 per cent. of magnesia, and especially coverings containing 85 per cent. of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. Beware of Fraudulent so-called "Magnesia" Coverings as well as those infringing on patents.

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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XL. No. 5.
WEEKLY.

BALTIMORE, AUGUST 22, 1901.

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Manufacturers' Record.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President

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RICHARD H. EDMONDS,
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BALTIMORE, AUGUST 22, 1901.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

An Opportunity for the South.

Within the last few years some active demagogic politicians and equally demagogic labor agitators and "yellow" journals, as distinguished from honest politicians and honest labor leaders (there are no honest yellow journals), have cultivated in the uninformed an entirely false idea of the rights of property and capital. Seeking popular favor by posing as the laboring man's friend, they have filled the earth with their denunciations of capital, and among unthinking people have created bitter animosity against all corporations. According to these people, corporations have no rights which the public must respect, and when a corporation dares to maintain its rights by law or by other means there goes up a great howl from these demagogues. Just now it happens that the United States Steel Corporation, in pursuance of a policy justified by economic necessities as well as by wise business judgment in concentrating plants where labor conditions are most favorable, is preparing to dismantle some of the mills in communities which have been particularly hostile to that company and move them to others where the value of such works is more intelligently appreciated. This action has raised a storm of protest, as though a company owning a plant had no right to transfer it to some more desirable locality—and desirability may mean a right public sentiment equally as much as natural advantages. Discussing this question, the New York Financial Chronicle presents some very strong points worthy of careful study by the business men of the country. Every intelligent man in the South closely connected with business interests knows that the agitation there against corporations and railroads and capitalists has proved to be a very serious hindrance to the work of Southern up-building. He knows that capital has been less ready to go South than it

would have been had there never come to that section the curse which in South Carolina is known as "Tillmanism" and in Texas as "Hoggism." These "isms" have represented the fight of the demagogic politician against the conservative upbuilding interests which have been striving to develop the employment-creating resources of the Southern States. The country is now learning through the action of the United States Steel Corporation that it is not only true that capital will not seek an undesirable location, but that even when invested in what might seem to be a permanent form it has the power to protect itself by removal. The review of this situation as presented by the Financial Chronicle is a clear statement of a case which is becoming of more and more importance to the country. Is the South ready to utilize such an opportunity and to prove to the world that it will afford the most liberal, intelligent appreciation of the rights of corporations? If so, some good may come to it as a result of the strike in some of the plants of the United States Steel Corporation.

The Potent Textile South.

Whenever conditions at Fall River, Mass., become stringent the textile potency of the South is emphasized by the New England press. Just at present there is an unfortunate situation as to labor in the great mill center, and a dispatch to the Boston Herald says that in the situation is involved the supremacy of New England in the manufacture of the cheaper grades of cotton goods. The Herald gives these reasons:

It appears to be admitted, both by the manufacturers and by several of the trade-union organizations, that Fall River is handicapped because the Southern manufacturers at Charlotte, S. C., and other places now familiar enough in name to Northern manufacturers, are able to ship the cheaper grades of goods North at a less cost than the mills of Fall River are able to supply these goods.

This simply means a revolution in the manufacture of cheap goods, and it is admitted, more or less directly, by local mill managers, that for the cheapest grades of goods Fall River cannot compete with the South, because the Southern mills have cotton practically at their doors, they can get coal at a cheaper rate of transportation, and labor is not only cheaper than it is in the North, but the hours of labor are longer.

Mill owners of Fall River, as well as the mill owners of other parts of Massachusetts, have been seeking opportunities in the South to manufacture the cheapest grades of goods. The weavers, mule spinners and all the other employees of the local Massachusetts mills know this just as well as the owners of the mills do. * * * When it comes down to a close inquiry into the merits of the present situation, there is no room left for doubt. It is practically certain that Fall River is losing the supremacy she has always had in the manufacture of coarse cotton cloths. This former monopoly is going to the South. But Fall River mills which were heretofore devoted to the production of coarse goods are now producing better goods, if not the finest goods, and the result is satisfactory all around. Rather less than one-third of all the operatives of the city are employed on the cheapest grades of work, and these persons could in forty-eight hours familiarize themselves with the machinery which produces the better-grade goods.

The owners of what are called the cheap mills are even more reluctant to admit that a change of conditions is at hand than are the labor people themselves. The leader of the Mule Spinners' Association says, for example, that under the stress of present conditions it should be a question of the survival of the fittest. That is, he explains, mills making low-grade goods, and not able to keep up to the market, should become subservient to more prosperous ones, or else they should not assume to be a party to any organization, nor should their employees.

It is confidently asserted by prominent owners and prominent employees, both of whom a Herald reporter talked with today, that the hope of Fall River, if she wishes to maintain her supremacy as the capital cotton city of the country, is in the skill of operatives and the quality of the manufactured product.

Before the Southern mills were started Fall River was virtually a cheap-goods manufacturing center. Some of the millmen saw what was coming when they realized how cheaply coal and cotton could be put upon the water-power centers of the Middle Atlantic States, and they made their mills over so that they could produce the better quality of goods.

With only one-third of all the operatives employed on cheap goods, the situation is not so bad as it might be, but it is quite plain, both from the attitude of the employers and that of the operatives, that the hope of New England, and especially Fall River, rests in the progressiveness of the mill managements in changing the mills over so that they may manufacture the best grades of goods, leaving the Southern mills to supply the cheaper grades.

The philosophic tone of this view of the Fall River situation is in harmony with the horse sense displayed by the leader of the Mule Spinners' Association in suggesting no interruption with the workings of the law of the survival of the fittest. In cotton manufacture, as in other lines of industry, the fittest will survive ultimately. In spite of artificial devices to maintain an impossibility. The progress of the South in textiles is naturally alarming to other centers looking only to the immediate present. But there is to be work enough for all in the cotton industry with a readjustment of conditions, provided the futile rivalry of sections is not permitted to cause the country as a whole to lose its palm.

The Southern Railway.

Operating with steadily-increasing success more than 6700 miles of railroad in the South, touching nearly every strategic point for transportation in the States south of the Potomac and east of the Mississippi, and contributing materially to their industrial and agricultural advancement and to the increase in their thrifty population, the Southern Railway is peculiarly Southern, and the facts brought out in its annual statements of its operations are an excellent index to the progress of the South. This year's report, published in this week's Manufacturers' Record, the seventh since the inception of the reorganization policy, is especially satisfactory to everybody interested in the welfare of the Southern Railway and the future of the section which it so admirably serves. It shows an extension of mileage, including the acquisition of two important lines, the Mobile & Ohio and the Louisville, Evans-

ville & St. Louis, a betterment of equipment and way, and especially notable, reduction of grades and curvature on the line between Asheville, N. C., and Knoxville, Tenn., and a large increase in both gross and net earnings. Expenditures for maintenance and improvement of way and equipment have been liberal, and in every department of its operations the company shows the same steady advancement which has marked its history under its present able management.

The Right to Work.

Mr. John Mitchell, who is known as one of the great lights in the firmament of organized labor, undertakes to combat in the Independent the opposition in this country to labor organizations. He essays rather a lofty flight, but he fails of his purpose in that he loses sight of what is, perhaps, the strongest and the most widespread form of opposition—that grounded in the unwillingness of the vast majority of wage-earners, whether they work with their hands, their heads or with both combined, to relinquish their individuality. Of course, whenever one man asks or accepts employment of another he yields a certain amount of his individuality, but he does it of his own volition. The safety and welfare of society, indeed, demand that men, probably the majority of them, must occupy subordinate positions. Except in barbarism or in anarchy, some, the few, must direct; some, the many, must execute. Such relations, though, do not imply a loss of independence or of personality on the part of employees, except in so far as their exercise might conflict with the independence and personality of employers. They do not antagonize the right of a man to seek work and to leave it whenever and wherever he may please to do so, provided he does not become a drone on the community, or the right of another man to give work or to take it away as it may seem best for him to do.

Labor organization, on the other hand, makes the demand in its final conclusions that the individual must suppress his right to voluntary action in seeking or holding work; that he must obey implicitly the organization or its autocratic representatives as to the kind of work he shall do, how he shall do it and when he shall do it, and in time of stress shall interfere directly or indirectly with the right to work of his fellows who may not be of the same mind. Where such organization has been most developed its effects are best studied, and the lesson of these cannot be lost upon the mass of men who support themselves and their families in working for others.

England, which has supplied America with so many notions of organized labor, has been prolific of these lessons. These are summarized by Benjamin Taylor in the current number of the North American Review. In his paper, which should be read carefully by every intelligent worker, whether in

or outside of organization, he takes the ground that the trade union, in theory an organization for the protection of labor against the tyranny and oppression of capital, is in practice an organization for the restraint of labor and the manacling of capital. He cites the rules under which members of English trade unions work, and makes these points of actual practice and its results:

The great object in American production is the saving of labor. The great object in British trade-union production is the dissipation of labor—that is waste.

The objects of the British trade-unionist are to equalize the wage of the mediocre or inferior and the capable workman; to restrict the amount of work done by each workman, so that they may be fewer unemployed; to restrict the total output so that prices, and consequently wages, may not be borne down by the oversupply.

A workman, on joining one of these organizations, ceases to be a free agent; he becomes a slave of his society and the tool of his officials. Does that make for manliness and individual energy and social well-being?

They have eliminated the spirit of emulation from the workshop, and have severed the old personal bond of sympathy and respect between the employer and his craftsman.

Upon the trade-union scales of time-wages the incompetent man is paid as highly as the competent man, which does not encourage the bad workman to become better, but does induce the good workman to become less efficient.

Mr. Taylor, though dwelling particularly upon the detriment wrought for the individual worker through organization, traces quite minutely to such organization the driving of the great shipbuilding industry from the Thames to the northern rivers, the expulsion of lacemaking from Nottingham to Scotland, of flint-glass making from England to Germany, and of bottle-making from Scotland to Belgium. He discusses the demoralization manifested in the engineering strike of 1897-1898, and in conclusion says:

I affirm, unhesitatingly, that whatever may be the theory of trade-unionism, it is working altogether on a false principle in Great Britain—that of restricting production. The application of this principle is increasing our costs and handicapping us in the industrial race. It springs from the fallacy that there is just a certain amount of work to be done in the world, which, spread out, will go all round the army of manual workers. It ignores the fact that work creates work, and that the more cheaply work can be done the more there will be to do. It opposes the teaching of experience that as machine tools displace labor in one direction they create more labor in another direction. If Great Britain fails in the industrial race it will not be because her workmen cannot create as well as others, but that they will not. * * * Britain's greatest national danger lies in the destruction of free trade in labor.

As Mr. Taylor believes that "the conditions of international competition will not be equalized until in America trade-unionism has developed as it has done in Great Britain," or, in other words, until American workmen have been brought through organization to the helpless condition of their brothers across the water, it behooves American workmen to look to it that they do not contribute to such a lamentable end.

These words apply peculiarly to the South, which has as yet not committed itself to a menacing extent to the ills from which capital and labor not only in England, but in parts of this country, are suffering, notably just a present at Fall River. The right to organize cannot be questioned. It is as inherently American as other rights of labor. But it should be exercised in discretion, in the determination that it shall not cripple the man in the organization or limit the equal rights of others. If organization must be had, the organization of capital, born of organization of labor, might furnish a

hint or two, for when capital organizes the stronger is not brought to the level of the weaker, but everything that hampers or impedes is cast aside.

Led Astray.

Our friend, the Philadelphia Record, we fear, is being gulled by somebody. In one of its issues of last week the editorial statement was made that "figures furnished by late official statistics of the United States government show the industrial growth of the South during the past twenty years to have been phenomenal," and this statement was followed by an array of exceedingly interesting figures comparing the South of 1880 and of 1900. As a matter of fact, it may interest the Philadelphia Record to know the figures it quotes were published on pages 423 and 424 of the Manufacturers' Record of June 27, 1901, in the report of a speech made at Asheville a week before that time by the editor of the Manufacturers' Record. The Philadelphia Record had forgotten that, perhaps, and was misled by the editorial in the Atlanta Constitution of a slightly earlier August date, which is being similarly cribbed by Texas newspapers, and in which the same figures were employed effectively and were credited not merely to official, but to "other reliable sources." Why this hesitation, friends, to credit work as it should be? Just see the dilemma in which the Atlanta Constitution has placed the Philadelphia Record through its timidity about revealing its secret for making statistical work easy. We haven't the least objection to the use of our name in connection with facts drawn from our columns. The Manufacturers' Record, be it known, is perfectly willing for its contemporaries to draw ad libitum from the results of its work in statistics or in any other department, and it assures them that they need not worry themselves about shielding it behind "figures furnished by late official statistics of the United States government" or the more indefinite "other reliable sources." We are willing to stand by our work, even though it saves others labor.

Hints from Japan.

In connection with efforts to extend American trade with the East, facts about the trade of this country with Japan and the industrial outlook there, reported by United States Consul-General E. C. Bellows at Yokohama, are of more than ordinary interest. The value of last year's commerce between the two countries was \$37,443,140.15, the trade of the United States with Japan exceeding that of any other country. America sent nearly one-half of the raw cotton imported by Japan, but its share in cotton goods was very insignificant, and in woolen stuffs nothing. America leads in the imports of bicycles, electric-light machinery, paper-making machinery, watch cases and watch movements, rails, rail fittings, iron nails, electric-light wire, telegraph wire, materials for bridges and buildings, illuminating and lubricating oils, sole leather, flour, phosphatic manures and cardboard. In other articles, in clocks, weaving machinery, paper, pig and ingot iron and sewing machines the United States is surpassed by Germany, and in cotton tissues, fire engines, pumps, tools and implements for farmers and mechanics, steam boilers and engines, photographic apparatus, locomotive engines and hose by Great Britain, while other

smaller nations are ahead of it in other particulars.

It might be well for American manufacturers to look into this matter with the purpose of strengthening their connections. They have the competition not only of men of other lands in the country which the United States reopened to the trade of the world, but Japan itself is preparing for an effort to become independent of them all, in a sense. It is looking for outside capital to aid in the development of its mineral resources. It is estimated that deposits of rich ore in Northern Japan exceeding 75,000,000 tons lie in the vicinity of copper and lead. To make these deposits available a company has been formed to improve a harbor, to build a railway, machine shops and an iron and steel foundry, and to open the mines. At the same time the Imperial government, "desiring," as Mr. Bellows writes, "to make the country independent of foreign aid in shipbuilding, railway construction and the supply of military and naval requisites," has commenced work upon a steel establishment for which \$7,056,425 have been appropriated from the government treasury. These works will cover an area of 225 acres and will be convenient to an excellent harbor. There will be three departments, each under the joint direction of two engineers, one Japanese and one foreign. The pig-iron department will be fitted with coke-oven and blast-furnace plants, the steel department with mixed Bessemer and open-hearth plants and a steel foundry, and the rolling-mill department with roughing-rail mill, large, middle and small bar mills, sheet mill and large and middle plate mills, this department including seven sub-departments. It is intended to fit each department with all needed appliances for doing the best work. The government has already opened an iron foundry, and there are other undertakings planned for the utilization of thousands of tons of iron, while a Japanese company has been given the task of constructing a railway in Korea.

Here is something for American ironmasters to consider. Will Japan stop, too, at its ambition to become a center of supply of iron and steel for China and the other East? Are Yankees of the Occident to find rivals in Yankees of the Orient?

Cooling Houses Mechanically.

In a letter to the Manufacturers' Record Mr. G. W. Soule, president of the Soule Steam Feed Works of Meridian, Miss., writes: "I would like to get through some of your readers an opinion as to whether or not the world is ready to adopt a method of cooling rooms, offices, etc., to be used in summer time, somewhat similar to the method of heating in cold weather. This summer cooling may be done mechanically and almost as simply as the winter heating. A building prepared in the beginning for both cooling and heating would use very largely the same apparatus. Should it prove that many persons are interested in this, we shall probably put the apparatus on the market."

Site for Machine-Tool Works.

The owners of a plant for the manufacture of modern machine tools desire, because of increasing business, to establish a new factory in a city having from 10,000 to 75,000 inhabitants. The factory would employ about 250 men. Letters addressed to "XX," care of the Manufacturers' Record, will induce correspondence of interest to Southern cities.

GETTING OIL TO MARKET.

An Important Problem in the Beaumont Field.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, August 17.

It is rapidly becoming a more interesting question how to get the best results out of the oil that has been obtained than it is to find more oil. In other words, the business of selling what we have is rapidly overtaking the question of getting more, and public interest is slowly but surely veering round to this view of the case. So far there are only four or five companies prepared for any selling, namely, the J. M. Guffey Petroleum Co., the Higgins Oil & Fuel Co., the Heywood Oil Co. and the Lone Star & Crescent Oil Co. Of course, other companies are prepared to sell oil at the well, but the concerns named are those which have facilities for marketing their oil, or are rapidly completing them. A prominent railroad official informed me a few days since that they had a proposition from a small company with a well to furnish them oil if the railroad company would build their tankage at both ends of the line, the well-tanks to eventually become the property of the oil company after sufficient oil had been paid for, as used, to offset the value of the tanks, these tanks, even after being paid for, to be constantly filled with storage oil to back up the contract. Companies that sell their oil to others at the mouth of the well, and do nothing else, will, do well to receive fifteen cents a barrel for it. If they go further, and deliver it in tank cars of their own, they may get seventeen or eighteen cents plus freight. The companies now doing business claim to be getting these prices twice over, but the writer knows of instances where bids as low as twenty cents have been made, and perhaps lower. As long as the oil flows of its own force there is profit in the stuff at ten cents a barrel at the mouth of the well. The prices named above may not be exactly what the oil is selling for today, but it will be at that figure before long.

Several new wells have come in during the week, the most interesting one being that of the Export Oil & Pipe Line Co., founded and organized by ex-Senator Chas. A. Towne of Minnesota. The well is the first well that is really off the Hill, although it is not far off. It is 100 feet east of the most eastern gusher on the Hill. It is deeper than any of the others, being something like 1150 feet, but it seems to support the theory that oil will be obtained by those drillers off the Hill who have determined to go down deep enough for it. It is of great value, also, to the Hogg-Swayne syndicate, in that it brings into the proven field an additional lot of their land which has hitherto been unsalable at good prices because it was not thought that a gusher could be brought in on this. The project for constructing large earthen reservoirs for the oil seems to be taking definite shape. It is now announced that the Manhattan Oil Co., which has a well on the Hill, will construct on its property off the Hill, distant perhaps half a mile, or further if it uses a different tract, earthen tanks. It is stated it will go to a 10-acre tract it possesses and make it into one huge tank measuring approximately 940x450 feet, and eleven feet deep, and levees are to be constructed ten to fifteen high on the outside. This plan is being given serious consideration by other companies as well.

During July the movement of pig-iron from Alabama and Tennessee amounted to 111,754 tons, an increase over July, 1900, of 44,121 tons. There were 15,959 tons of pipe shipped from the district during last month.

In the Birmingham District.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., August 19.

There have been so many conflicting influences to affect the market that it has been hard to read its trend. When it looked steady and firm, it would weaken. When it looked friendless, it would stiffen up. The first half of the past week it looked very limpy. The last half of the week developed an increased demand, and there was unquestionably a firmer tone to it. There was no activity in the demand. It was not sufficient in volume to equal output, but it was enough to firm the market and hold it on an even keel. No. 2 foundry iron sold as a rule at \$10.50. But there were cases where sellers refused that price. In those cases it was simply a question of not having it to spare. For No. 4 foundry \$9.50 was the market, yet there were instances where \$9.50 was declined. Gray forge was pretty steadily held at \$9.25. No. 2 soft was \$10.50, and No. 1 soft was \$11. There was a very fair demand for basic iron at \$11 for the last quarter of 1901, and some sales were registered. The demand indicated that sellers as a rule were limiting themselves to present necessities. There was not that free buying indicating confidence in the market. Some sellers attributed the firmness to the weakness of the strike movement, which they regarded as the main obstacle to a firmer market, and were disposed to hold firm. There was little or no disposition from any source to grant any concessions in prices. For small orders an advance of twenty-five cents over quotations given was frequently obtained.

The export trade is now attracting attention, and it is current "on dit" that at least one important order was placed. Italy is credited with being the purchaser. Freight room is freely offered, and agents are offering accommodating terms to shippers. It looks as if that trade was on the eve of a revival. Several lots are at this writing under negotiation, with every prospect of successful conclusion. The exports of iron for July amounted to only 152 tons. The dead condition to which the trade had arrived is clearly shown, and the prospects for its resurrection excite great interest.

The Republic Iron & Steel Co. has closed a contract covering a cost of \$60,000 with the Means-Fulton Company for the erection of a new stockhouse 629x91 in dimensions and containing 244 bins for ore and limestone. Each bin is built of wood and lined with sheet steel. It has just completed the erection of four large furnace stoves, and in a short while will have its new furnace in operation. Caldwell & Watson have let the contract for their new foundry buildings, to be completed in sixty days. It is to be a foundry and machine shop capable of making heavy castings.

The Talladega press announce on high authority that the Talladega Furnace Co. will erect a steel plant, as well as one or more additional furnaces, and announce that a close alliance has been formed between the furnace company and the shipbuilding plant to be erected near Mobile. No one here can confirm this.

There is very much prospecting going on in East Alabama for desirable brown-ore properties, and some lots have changed hands. When projected railroads are completed and an outlet made for the ore a ready market will be found for the ore. Many of the old pockets have been exhausted, and virgin fields are in demand.

J. M. K.

Mr. L. I. Jacobs of the Tennessee Copper Co. of Ducktown, Tenn., is quoted as stating that the new smelter of the company, with a capacity of 1000 tons a day,

is now in full operation, and that as rapidly as possible its capacity will be increased to 3000 tons.

The Pig-Iron Market.

Matthew Addy & Co. of Cincinnati in their weekly report say:

"Business keeps up in a most remarkable and satisfactory way. Neither the strike nor the drought have had the slightest effect on it, and today consumption is evidently at the very highest point ever reached in America. The July statistics showed production that month declined, as did furnace stocks. Consumption and production are now pretty nearly balanced, although the former is undeniably the greater. The stocks on hand in furnace yards represent about all the merchant iron in the country. Consumers have no iron in their yards; in fact, most of them have so small a supply ahead that a delay of a week in making shipment has often caused a temporary shut-down. It has been the policy of most buyers for several months now to buy iron only as it was needed for immediate consumption. This explains the regular and constant buying, which has been such an unusual feature of summer. The week just past was more active than any week recently. There were several round-lot orders placed for gray forge, foundry, car-wheel and malleable irons. Then the smaller orders footed up to a goodly tonnage. While these minor orders are not much in themselves, yet they form the backbone of trade. Prospects for the near future are good. The little buying is bound to keep up just as it has been doing for so long; then there are several large inquiries now on the market. These will in the next few days be turned into actual business."

ATTACKS UPON CORPORATIONS.**Baleful Effects Upon Communities Hostile to Capital.**

[New York Commercial and Financial Chronicle.]

Dismantling mills—as report says is being done today in places where public opinion or officials threaten not to protect them—and replanting the mills in places where the prospect is they will be protected, is merely the working out of a familiar economic principle. In the matter of fixed capital the action of this law is usually so slow and occult that the teaching is not heeded, and generally not even recognized; but in the case of strictly floating capital, which is readily moved, the flight comes as a quick response to the first fear, and is an oft-repeated incident. What the people are likely to learn on the present occasion—and it is a much-needed lesson—is that capital possesses all degrees of mobility, none, indeed, being so attached to place as to be, in case of threatened harm, wholly beyond the reach of its owner. Probably a railroad is the least able to protect itself against attack. Hitherto it has been supposed that a mill stood in pretty much the same category. It is with reference to that situation that the week's events are so useful, affording as they do quite a new revelation. They disclose that a manufacturing establishment can strike back; that it is mobile enough to "get up and get" if the occasion is such as to demand what may be called heroic action. Of course the transplanting entails a great loss, but a sacrifice is necessary where the struggle is for existence.

We say the movement will entail a great loss; but in our opinion it will well repay the expense of the transaction, however great that loss may be. Indeed, it is an object-lesson which seems to be made almost essential by the state of public opinion at the present moment in some

quarters, and for that reason we trust it will be carried through, whether the continuance of the strike be long or short. Contrast present hostility with the effort the inhabitants of a locality often make to secure the building of a factory. Sometimes they promise money, sometimes land, often relief from taxation for a time, to draw such an enterprise to their town. They are wise in all that, because after a few years it will, they know, enhance real-estate values, establish numerous trades, enlarge almost every merchant's business, very likely also attract other factories, and pay annually, directly and indirectly, a large portion of the city's taxes. When, however, all this has been secured, and the balance between the debit and credit sides of the account shows the city largely in debt to the corporation, the public suddenly wakes up to a realization that its benefactor is really nothing but a horrid, soulless corporation. Preachers fall in line with the popular issue, giving a new interpretation to brotherly love and to the command "Thou shalt not steal" by excepting corporations and the property belonging to them. At this stage, too, politics, finding the issue a taking one, adopts the wage-earner, announcing in the party platform (stated in brief) that anything he wants he can have. Under such circumstances who can blame the workers, many of whom are not overstocked with brains, if they ask for the sun and moon and stars as well as the earth?

These few suggestions correctly portray the attitude at present existing towards industrial corporations on the part of the general public in wide localities. We do not believe that anywhere a majority, or nearly a majority, really favors the policy pursued, but as it has worked no traceable harm in the past to individual interests, a large portion of those who know the right and should oppose hostile action find it easier to let the movement run its course than to fight it. The conclusion is the public sleeps while the wage-earner is being debauched by overdoses of sympathy, and so the politician finds the issue a paying one. Nothing short of an earthquake will disturb this complacency, reverse the prevailing sentiment and set thought a-running in a new channel so as to make these various parties not only see but feel that this great law of trade applies to corporations, and can and will drive them out of every town where they cannot be protected as perfectly as other property is. What is desirable is to have the removal so immediate that the results presented to the eye of the public will stand out in strong contrast. The nature of the losses the activities of the town would suffer by the removal of a mill we need not portray. They would be along the same lines as the benefits secured by its location.

We urge this because a mere end to the present strike does not by any means put an end to the movement for unionism. A settlement made by simply taking the men back only defers the ultimate struggle. The old contest will come up again, probably with the issues less sharply cut than now and at a time less convenient for employers. More likely than not a reappearance will be forced when an important election is impending. Unless the conceit can be knocked out of these strike leaders, their followers and official supporters, and unless the cost of encouraging the error is keenly felt by those who are favoring or passively permitting its prosecution, business interests cannot expect anything like a peaceful development. On the other hand, the actual removal of a few mills from those points where the public seems wholly to have lost its moral sense and refuses protec-

tion to mill property would not only tend towards creating more conservative views at those places, but would tend to stimulate the growth of just judgments on labor disputes all over the country. When it has once become known that mills can strike back, the practice of high officials proclaiming that the mills and non-union men who choose to accept employment shall be left to the mercies of excited strikers will be less boldly advocated.

Building at Shepherdstown.

[Special Cor. Manufacturers' Record.]
Shepherdstown, W. Va., August 18.

The regents of the normal schools have awarded contract to S. A. Westenbaver of Martinsburg for the erection here of a new building for Shepherd College. The building is to be a splendid structure of buff brick and Cleveland stone 157 feet in length by 104 feet in depth. It is of Corinthian style of architecture, and will have an imposing portico at the entrance supported by six stone pillars. The cost will be \$35,000. Harrison Albright of Charleston was the architect, but the building will be built under the direction of Ira E. Robinson and H. L. Snyder, a committee of the board of regents.

The town council of Shepherdstown has let the contract for an electric-light plant to the Jacob G. Schaff Co. of Chambersburg, Pa. It will be an up-to-date little plant, furnishing both arc and incandescent lights for street-lighting, with ample power for commercial lights. A Fort Wayne dynamo of thirty-seven kilowatts will be installed, and the power will be furnished by an Erie engine of fifty-five horse-power and boiler of sixty horse-power. The Pennant Knitting Mills of Philadelphia, recently moved to this place, are beginning to turn out their product.

A New Rice Mill.

The completion of the Donaldsonville (La.) Rice Mill was celebrated last week by the people of that town and its vicinity. The plant consists of two brick buildings, the mill and warerooms and the boiler-house. The main building is 100 feet in width and 350 feet long, with two-story warerooms 150 feet long and 100 wide at each end. The mill proper, four stories in height, is between the warerooms, and its floors are fifty feet wide and seventy-five long. The engine-room, 50x75 feet, is immediately in rear of the mill, but only one story in height.

Motive power will be supplied by a Filer & Stowell Corliss engine of the very latest design, with a 22x48 cylinder, capable of developing from 350 to 400 horse-power, and having a rope transmission flywheel grooved for seventeen rounds of 1 1/4-inch manila rope. The milling machinery consists of three hulling stones, each five feet in diameter; sixteen rice-rullers, eight of Engelberg and eight of Barnhard make, each of which will have a capacity of 150 sacks of rice per twelve hours; three large polishing brushes and all the latest improved fans, graders, separators, etc., necessary to make the mill one of the largest, most complete and best equipped in the United States.

Shipbuilding at Richmond.

Eight vessels are now in course of construction at the yards at Richmond of the William R. Trigg Shipbuilding Co. They include six vessels for the United States government, one for the Chesapeake & Ohio Railway Co. and one for the Old Dominion Line. It is reported that the company will soon prepare for the construction of its \$300,000 dry-dock.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

A Southern Bleachery.

One of the most important announcements ever made in connection with the Southern textile industry has appeared during the current week. It is the announcement of the completion of the \$300,000 bleachery at Clearwater, S. C., the first of its character in this section to cater to the general mill trade. There are two other bleacheries in the South, but they are operated in conjunction with cotton factories. The plant just completed will print, bleach and dye sheetings, drills, ducks and satens, and its weekly capacity is 100 tons of goods. The operators have been chosen from the leading plants in New England, and the company owning the bleachery expects its plant to be but the initial step that will ultimately result in the South printing, bleaching and dyeing all of its manufactured cloth. The establishment of the bleachery is due to the efforts of Mr. Thomas Barrett, Jr., of Augusta, Ga., the company's president, who has for years been identified with the cotton-manufacturing interests of the South.

A \$50,000 Silk Mill.

The Collinge & Nolan Company of Paterson, N. J., has finally completed arrangements for re-establishing at Hagerstown, Md., the silk mill that was burned some weeks ago. The plant will include a \$10,000 building and \$35,000 worth of machinery. About 150 hands will be employed when the mill begins operations. Frederick G. Burger has been awarded contract to erect the building, to be three stories high, of brick, a counterpart of the burned structures. Hagerstown parties supply \$4000 of the cost of the new structure in order to secure the industry.

Bonnie Cotton Mills.

The Bonnie Cotton Mills of Kings Mountain, N. C., which completed its plant some months ago, started operations with 4300 spindles on twist ply yarns from 8s to 40s. It has now decided to add 1000 spindles this fall and more spindles later on to fill building. The whole cost will be about \$100,000. Seventy-five hands are employed, which will be increased to 175 in a few months. All the tenement-houses are nearly completed. J. S. Mauney is president.

Textile Notes.

Reports say the Darlington (S. C.) Cotton Mills may increase looms from 800 to 1400 in number.

Kesler Manufacturing Co. of Salisbury, N. C., has declared a semi-annual dividend of 3 per cent.

Virginia Woollen Co. of Winchester, Va., will not double its mill, as had been reported, but will double its power plant, and is now in the market for a new boiler and engine.

McRae (Ga.) Cotton Mills Co., previously organized, has let contract for erection of 100x200-foot building, in which it proposes placing its intended 5000 spindles and 200 looms.

It is proposed at Fort White, Fla., to establish a mill for knitting hosiery, and

C. H. Thompson is interested. Mr. Thompson is desirous of corresponding with makers of the necessary machinery.

It is contemplated to establish a knitting mill at Lake City, Fla., the product to be hosiery. M. M. Scarborough, secretary of the Board of Trade, is interested, and is requesting correspondence with makers of machinery for knitting hosiery.

Chatham Manufacturing Co. of Elkin, N. C., is just completing an addition that has been under construction for some time. The addition is two stories high, 75x210 feet, and its equipment will be largely wool machinery for production of cotton blankets.

Messrs. Wm. McGill, W. J. McGill, E. Caldwell, J. B. Frierson and J. T. Allison have purchased and will operate the Sylvan Mills at Shelbyville, Tenn. They have obtained new charter as the Sylvan Cotton Mills; plant has 3720 spindles and 104 looms.

Work is progressing rapidly on the Bessemer City (N. C.) Cotton Mills, which will have 7500 spindles and 175 looms. This \$125,000 company intends to manufacture fine striped sheetings and will commence operations soon. The machinery has been bought.

The Anderson Cotton Mills of Monticello, Ark., previously proposed, has fully organized, with capital stock of \$80,000, and commenced erection of buildings. Maj. W. M. Anderson is the prime mover in the enterprise. Sheetings and osnaburgs will be the product.

The Neuse River Mills, a 5000-spindle and 150-loom plant near Raleigh, N. C., does not intend to double, as had been rumored. However, the company is installing additional machinery, but is averse to stating its extent or character. Fine sheetings is the product.

The Southern Railway & Development Co. of Petersburg, Va., has purchased control of the Mattoaca and Ettrick Cotton Mills and will continue their operation. The company makes the purchase to complete its holdings of water-power privileges on the Appomattox river.

Standard Knitting Mills Co. of Knoxville, Tenn., is increasing its plant, which was completed in February last. Six more knitters have been added, making thirty-six in all, and seventy-five operatives are employed. Daily output is thirty-six dozen suits of men's underwear.

Lumberton (N. C.) Cotton Mills has completed its 5000-spindle plant, and expects to commence operations in September. The mill building is a one-story structure 77x243 feet in size; boiler and engine rooms, 40x41 feet. The weekly capacity, double time, will be 21,000 pounds. Nos. 20s to 32s yarns will be made.

Petersburg (Va.) Hosiery Co., whose plant was damaged by fire last week, states that new plant to cost about \$7000 will be completed within thirty days, its equipment to give a daily capacity of 500 dozen pairs ribbed hosiery. The completed entire plant will have cost about \$15,000, with an equipment of 100 knitters and complement of ribbers, loopers, etc.

The Alpine Cotton Mills of Morganton, N. C., is progressing steadily with the construction of its plant, and expects to begin operations in October. The building is one story high, 75x350 feet, to contain 7000 spindles for the production of about 40,000 pounds of high-grade yarn weekly. About 100 hands will be employed. Company is capitalized at \$100,000.

L. B. Whatley, 118 High street, Portsmouth, Va., mentioned last week as asking for prices on cotton-batting machin-

ery, states that he and associates have erected building for a knitting mill. The building is two stories high, 40x80 feet, and will be equipped for hosiery manufacture, but owing to conditions in the hosiery market the parties are investigating the manufacture of cotton batting and bags, although they have not abandoned hosiery. Mill is expected to be in operation by October 1.

Woodstock Cotton Mills of Anniston, Ala., has placed all contracts for the machinery needed to double its 5260-spindle hosiery yarns plant, an improvement reported last week as to be made. The Howard & Bullough Machine Co. of Pawtucket, R. I., will supply the textile machinery; Fishkill Landing Machine Co. of Fishkill-on-Hudson, N. Y., the engine, and Heine Safety Boiler Co. of St. Louis, Mo., the boiler. The improvements will give the company a daily output of 35,000 to 45,000 pounds of yarn.

QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, August 20.

No. 10s-1 and 12s-1 warps.....	13 @
No. 14s-1 warps.....	13 1/2 @
No. 16s-1 warps.....	13 3/4 @
No. 20s-1 warps.....	14 @
No. 22s-1 warps.....	14 1/4 @
No. 26s-1 warps.....	15 @
No. 6s to 10s bunch yarn.....	12 1/2 @
No. 12s-1.....	13 @
No. 14s-1.....	13 1/2 @
No. 16s-1.....	13 3/4 @
No. 20s-1.....	14 @
No. 22s-1.....	14 1/4 @
No. 26s-1.....	15 @
No. 8s-2 ply soft yarn.....	13 @
No. 10s-2 ply soft yarn.....	13 1/2 @
No. 12s-2 ply hard.....	13 @
No. 14s-2 ply.....	13 1/2 @
No. 16s-2 ply.....	14 @
No. 20s-2 ply.....	14 1/2 @
No. 24s-2 ply.....	15 @
No. 26s-2 ply yarn.....	15 1/2 @
No. 40s-2 ply.....	16 1/2 @
No. 8s-3, 4 and 5 ply.....	12 1/2 @
No. 20s-2 ply chain warps.....	14 1/2 @
No. 24s-2 ply chain warps.....	16 @
No. 26s-2 ply chain warps.....	16 @
No. 30s-2 ply chain warps.....	17 @
No. 16s-3 ply hard twist.....	14 @
No. 20s-3 ply hard twist.....	14 1/2 @
No. 26s-3 ply hard twist.....	15 1/2 @

Market quiet; prices nominal.

Cottonseed-Oil Notes.

It is stated that the cottonseed-oil mill at Selma, N. C., is now the property of the Southern Cotton Oil Co. The deal was closed in Goldsboro, N. C., on the 17th inst., the consideration being \$40,000.

The work on the cotton-oil plant at Jacksonville, Fla., the property of the Florida Cotton Oil Co., is proceeding rapidly, and the company hopes to have the plant in readiness to operate by the end of October.

It is stated that the Southern Cotton Oil Co. has purchased the oil mill of the Kathwood Manufacturing Co., twelve miles from Augusta. The mill is modern in every respect, and crushes twenty tons of seed per day.

The Montezuma Oil & Fertilizer Co. at Montezuma, Ga., has completed its oil mill, a massive brick structure, and will have its other buildings completed shortly. When everything about the plant is in readiness the work of crushing will commence.

The plant of the Hill City Cotton Oil Co. of Vicksburg, Miss., was sold on the 14th to the highest bidder by Mr. T. Marshall Miller of New Orleans. Mr. H. L. Stoutz, representing Steinhart & Co. of New Orleans, was the purchaser. A new organization will be formed under a new charter, and the mill will be operated under a new management.

From the returns prepared by the comptroller-general of South Carolina for the State board of equalization the following figures in reference to cottonseed-oil mills are given: Capital stock when organized, \$2,828,837; present capital

stock, \$2,732,737; bonded debt, \$36,000; value of plants, \$1,037,900; annual ton capacity, 127,797; annual product in gallons, 2,854,662; tons of hulls, 36,572; tons meal, 37,649; employees, 681; pounds of linters, 255,113; horse-power, steam, 6691; assessed value for taxation, \$754,317.

A meeting of the Texas Cottonseed Crushers' Association was held last week at Dallas, Texas, for the purpose of discussing the fuel situation and the state of the cotton crop. President Keyser of Marlin presided. The fuel question was discussed at length. The comparative value of oil and coal as steam producers and the cost of shipping, handling and firing both fuels were explained by many millmen who had tested them. After considerable discussion it was decided that oil is the fuel for Texas manufacturers at the present prices of coal.

The following are the official quotations of cotton and cottonseed products as posted at the New Orleans Cotton Exchange on the 19th inst.: Prime refined oil, in barrels, per gallon, 36 to 37 cents; off refined oil, in barrels, per gallon, 35 cents; prime crude oil, loose, per gallon, nominal; prime cottonseed cake, per ton of 2240 pounds, \$24; prime cottonseed meal, per ton of 2240 pounds, \$23.75; soap stock, per pound, 1 cent; linters, choice, per pound, 3 1/4 cents; A, per pound, 3 1/2 cents; B, per pound, 3 3/4 cents; C, per pound, 3 cents; cottonseed, in sacks, delivered at New Orleans, per ton of 2000 pounds, \$10; in bulk, delivered at New Orleans, per ton of 2000 pounds, nominal.

The Cosmopolitan will endeavor to repeat its past success in such work with a Pan-American Exposition number, which will be even more attractive, if possible, than its World's Fair predecessor. The most famous writers of the country have been invited to take part in the preparation of this issue. After many days' careful study of all the wonderful scenes of the exposition, more than a hundred photographs have been prepared, which, taken as a whole, give a thorough conception of the marvels of this exposition. It is doubtful if any book selling at forty times the price of the magazine will give any description of the fair which will approach in interest and artistic value the September Cosmopolitan.

The Pine Bluff (Ark.) Commercial League is widely circulating a handsomely illustrated article by its secretary, Mr. E. D. Russell, descriptive of the city and the county—Jefferson—in which it lies, and pointing out clearly the local advantages of natural wealth resources for manufacturing and other factors making for a home of industry, thrift and prosperity.

The Continental Glass Co. has been organized at Richmond, Va., with Samuel B. Dunston, president; J. E. Fowler, secretary, and C. F. Sauer, treasurer, to manufacture bottles and cathedral glass.

The increase in the value of taxable property in Georgia during the past year amounted to more than \$17,500,000. McDuffie county showed the greatest increase, \$357,340, of any in the State.

A dispatch from Nashville, Tenn., states that deposits of fluor-spar near the junction of Smith, Wilson and Trousdale counties, Tennessee, are being developed by a \$10,000 company.

From London comes the announcement that the vessels of the proposed five days transatlantic steamship line will use Texas oil as fuel.

PHOSPHATES.**COMBINING IN PHOSPHATES.****The Consolidation of Interests in Tennessee.**

[Special Cor. Manufacturers' Record.]

Mt. Pleasant, Tenn., August 19.

To all appearances the consolidation of the phosphate fields of Tennessee under one management is now an assured fact. The local phosphate land owners, whose properties have been under option to Messrs. Rogers & Gray of Philadelphia, have been officially notified that the options are to be exercised, and, according to these options, prospectors and engineers are now at work estimating the tonnage of rock on each property. During the past week the prospectors have been at work on the properties of the four larger companies operating here, namely, the International, the Bluegrass, the Howard and the Central, and the work is being hurried as rapidly as the weather will permit. The prospecting done so far has been much more satisfactory than was expected, and the fact is now developing that there is a much larger amount of rock in the field than even the owners of the property thought.

The consolidated concern secures a very large per cent. of the valuable rock in Tennessee, including the "blue rock" of Hickman county, the gray rock of Perry county and the brown rock of the Mt. Pleasant, Carter's Creek and Gallatin districts. The principal concerns owning rock not included in the combine are the Tennessee Phosphate Co. of Mt. Pleasant, the Ruhm Bros.' property at Southport, the Export Phosphate Co. (J. K. Orr place) of Mt. Pleasant, and the holdings of Mr. M. E. Wheeler of Vermont. Besides these, there are a number of undeveloped tracts of land and farms which are not included, and also several tracts which are owned and operated by fertilizer concerns which consume their own output.

The continued rains of the past two weeks have materially interfered with the prospectors and engineers in their work, though as many hands as can be found are at work whenever the weather will permit.

The outlook for business in Mt. Pleasant is very encouraging to the citizens of the town, as it is currently rumored that the consolidators of the phosphate fields intend to at once build a new railroad passing through the phosphate field from east to west, and will also locate several large fertilizer plants here and at other points in Tennessee. This rumor is confirmed by the statement that the purchasers are also on a deal for several thousand acres of land in North Carolina on which has been found a valuable bed of iron pyrites. With this valuable mineral under control and so nearby, the consolidators can secure their sulphuric acid at a nominal cost.

Other parties here whose properties may not be included in the combine are now on a deal with Chicago capitalists for the location of a \$200,000 fertilizer plant here. The local parties interested have under control very nearly 1000 acres of phosphate-producing land immediately on the railroad and only a mile or so from Mt. Pleasant, and can furnish enough rock to supply such a fertilizer concern for many years. A valuable bed of iron pyrites which has but recently been discovered in Arkansas is also being developed by the same concern.

The identity of the people who are putting up the money to effect the combine here has not been given out. The purchases are being made through a New York brokerage firm, Messrs. Bryan &

Sharp, but as to who they represent is being guarded as a secret. Mr. R. H. Wright, an expert who has for several years been associated with the Virginia-Carolina Chemical Co., and Judge S. Q. Weatherly, the first discoverer of Tennessee phosphate, have charge of the prospecting operations. The full particulars of the deal cannot and will not be given to the public until after the prospecting is completed.

Phosphate Markets.

Office Manufacturers' Record,

Baltimore, Md., August 21.

The local phosphate market has ruled quiet during the past week, and, as in all other fertilizer ingredients, the volume of business is light, with values nominally steady. The only charters reported during the week were the British steamer Hexham, 1046 tons, from Tampa to Plymouth and Bristol with phosphate rock at 16 $\frac{1}{2}$ ¢ August, and the British steamer Largo Bay, 1267 tons, from Savannah to Hamburg at 13 $\frac{1}{3}$ ¢ August. During the past week operations in the Southern phosphate fields have been on the same scale of improvement as previously reported, and the mining sections have been shipping freely. At Mt. Pleasant, Tenn., the scheme of consolidation is being dealt with, and the work of prospecting the phosphate fields and estimating the tonnage of rock on the several properties is being carried on as rapidly as possible by the promoters of the consolidation. In regard to the tone of the market, there is considerable improvement in prices, the demand being fairly active for both home and export rock. The situation in South Carolina is better, the foreign shipments of rock increasing somewhat, and the output of the several companies along the Ashley river is fair. Prices are generally steady for crude and air-dried rock. In the Florida section the work of mining is fairly active, and the demand for both pebble and hard rock continues moderate. All transactions at the moment are for 1902 delivery. Shipments from the ports are being made in larger cargoes than usual, and the business for the present month will show up fully as great as for July.

Fertilizer Ingredients.

The ammoniate market is generally quiet, with no demand except at concessions from sellers' prices. There is, however, no pressure to sell, and stocks in the West are reported light. Sulphate of ammonia is steady for early shipments. Nitrate of soda is easier for spot, owing to recent arrivals in New York.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$2 70	@ 2 72 $\frac{1}{2}$
Nitrate of soda, spot Balto....	1 85	@ 1 90
Blood	2 27 $\frac{1}{2}$	@ 2 30
Azotine (beef).....	2 35	@ —
Azotine (pork).....	2 35	@ —
Tankage (concentrated).....	2 20	@ 2 22 $\frac{1}{2}$
Tankage (9 and 20).....	2 30 & 10 $\frac{1}{2}$	@ 2 35 & 10
Tankage (7 and 20).....	20 00	@ 21 00
Fish (dry).....	27 50	@ 30 00

Phosphate and Fertilizer Notes.

The British steamer Glenmore cleared last week from Beaufort, S. C., with 4000 tons of phosphate rock from the Central Phosphate Co. for the United Kingdom.

The Adair & McCarty fertilizer plant at Chattanooga, Tenn., is practically completed. The plant will begin operations in a few days, giving employment to seventy-five or eighty hands.

The British steamer Nymphaea for Dublin and Aberdeen cleared last week from Savannah, Ga., with 650 tons of phosphate rock for the former and 1910 tons of rock for the latter port.

The board of phosphate commissioners of South Carolina last week elected T.

J. Cunningham of Chester, S. C., as phosphate inspector to fill the vacancy caused by the death of Colonel Vance.

It is stated that the prospecting of phosphate lands in the Tennessee phosphate field recently sold to Eastern capitalists is progressing rapidly, except for the delay by the rain last week. The work on the Bluegrass and International Phosphate Co.'s lands will soon be completed.

It is stated that G. A. Swift of Chicago has purchased from Walter A. Bailey of Spring Hill, Tenn., the phosphate lands and mines of the Gallatin Phosphate Co. of Gallatin, Tenn. This is one of the richest phosphate fields in Summer county, and it is understood that Mr. Swift will begin operating the mines at once.

Underlying a large portion of the prairies in the southern portion of Dade county, Florida, are said to be vast beds of yellow ochre used for paint. Rumors are afloat that there is a company of capitalists investigating these deposits with a view to erecting a large plant for refining the ochre and placing it on the market.

It is stated that local phosphate land owners at Mt. Pleasant, Tenn., whose properties may not be included in the consolidation of companies are now negotiating with Chicago capitalists for the establishing of a \$200,000 fertilizer plant at Mt. Pleasant or Nashville. This deal, it is reported, has been pending for several months awaiting the final result of the proposed combine of phosphate companies.

New Orleans Vessel Lines.

According to a dispatch from New Orleans, efforts have been made to interest George Gould in a vessel line to Philadelphia. It is reported that the steamship line may be operated in connection with one of the Gould railroad systems, possibly the Texas & Pacific. It is understood that the Texas & Pacific has had under consideration a plan to operate a line of vessels between New Orleans, West Indian and Central American ports to carry fruit and other products.

The following vessels cleared last week from Jacksonville with full cargoes: Schooner Eva A. Danenhower for New York with 220,000 feet of cypress lumber, and schooner Mary Sanford for the same port with 375,000 feet of yellow-pine lumber. The new Clyde Line steamer Arapahoe cleared for New York with 400,000 feet of lumber and 6000 bundles of shingles.

J. H. Allison, president of the J. H. Allison Lumber Co. of Fitzgerald, Ga., has begun the erection of a saw-mill at Lumber City, Ga., on the Ocmulgee river, to have a capacity of 40,000 feet of lumber per day. The company has purchased about 10,000 acres of timber on that river, and will raft and drift down to mill.

Plans are making to start in September a monthly service from Galveston of the French line, the Compagnie Generale Transatlantique, which operates big liners between New York and French ports.

The sales in the Joplin (Mo.) district during the week ended August 17 were 9,993,430 pounds of zinc ore and 1,340,820 pounds of lead ore, valued in all at \$151,690.

The Marsden Cellulose Co.'s new plant at West Point, Va., has been completed at a cost of \$100,000. It will employ 150 men and use 10,000 tons of cornstalks annually.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Extension in Texas.

The Cane Belt Railroad, recently completed in Texas between Sealy and Bay City, a distance of about seventy miles, is owned by a syndicate of St. Louis capitalists, in which, it is understood, the Lincoln Trust Co. is interested. According to a dispatch from St. Louis, the owners of the road are so well pleased with their investment that they have under consideration a plan to extend it further in the sugar and rice belt. With the proposed extensions the total length of the road will be over 100 miles. It is understood that the trust company referred to proposes to float bonds to the extent of \$750,000 to furnish necessary financial backing to the enterprise. The authorized capital of the company is \$3,000,000, and it includes A. B. Woerheide, August Meyer and E. H. Coffin. Mr. Woerheide is president of the trust company.

Possibly a New System.

Recent buying of stock of Norfolk & Western Railroad has given rise to a report that it is to become the eastern end of another system, extending east and west through a portion of the Southern States. According to the report, a line may be built from Knoxville, Tenn., to Bristol, the terminus of the Norfolk & Western. From Knoxville a connection would be obtained with the Choctaw & Memphis Railway, in operation from Memphis to a point in Indian Territory. If the combination referred to is carried out it would represent a system of several thousand miles in length, terminating at Denver, Col.

West Virginia Central & Pittsburg.

At the last meeting of the stockholders of the West Virginia Central & Pittsburg Railway Co. the present directors and officers were re-elected. It was decided to increase the capital stock from \$10,000,000 to \$15,000,000, it is understood, with a view of arranging for further extensions and improvements to the system.

Railroad Notes.

The Business Men's Club of Memphis, Tenn., has become interested in the opportunities for trade offered in the territory along the Choctaw & Memphis Railway system, and is considering plans to secure it. Conferences are being held with the railroad officials by President Frank Hunter of the club with this aim in view.

In a letter to the Manufacturers' Record Mr. Leroy Springs, president of the Lancaster & Chester Railroad Co., reports that the company is about to change its line from narrow to standard gauge. An issue of \$135,000 in bonds has been made to finance the plan. The road is in operation between the towns mentioned, and is about twenty-nine miles in length.

The cities of Anniston, Gadsden and Attalla, Ala., have decided to unite in an effort to secure the construction of a railway line through Blount county, and have appointed committees to confer with the Louisville & Nashville Company in the interest of the project. The road, if built, will be a branch of the Louisville & Nashville, and reach the coal and ore beds which exist in this section of the State.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., August 20.

There has been no material change in the local lumber market during the past week, and the movement in every department is about up to the average for this period of the season. The demand from nearby towns and for material for building purposes is slightly improved. Box manufacturers are buying more freely, but only in small lots for immediate use. There is a slight improvement in box grades, and rough lumber is selling right along, with prices about steady. The demand for North Carolina pine from Northern and middle sections is fairly active, and prices for desirable material firm and hardening. There is also a fair foreign inquiry for certain descriptions of lumber suitable for the markets of the United Kingdom and Continent. White pine and cypress are both selling, but the volume of transactions continue light. Georgia pine is steady, with fair receipts, equal to the moderate demand present. In hardwoods the market is slightly improved over that of July, and the demand from nearby towns is fair, with prices steady for good dry lumber. Dry lumber at mills in Tennessee and West Virginia is scarce, and holders firm in their views. The export trade in hardwoods continues to show unfavorable conditions, and shippers are not pressing business while foreign markets continue so uncertain.

Charleston.

[From our own Correspondent.]
Charleston, S. C., August 19.

A fair volume of business has been reported during the past week, and the lumber market is generally very steady, with a good demand from the usual sources. The tone of prices may be written steady to firm, and both in cypress and yellow-pine lumber the better grades show a decided improvement. During the week the schooner Laura cleared for New York with 395,898 feet of yellow-pine lumber, and the Clyde steamship Algonquin with 32,737 feet of lumber among her cargo. The steamship Seminole took out 39,969 feet of lumber with other cargo for Boston. The total clearances of lumber from this port for the season, domestic and foreign, amount to 48,894,066 feet, against 58,314,888 feet last year. All the mills at Georgetown are working at their full capacity, and the shipments of cypress and yellow pine are showing up better than last month. It is reported here that the Atlantic Coast Lumber Co., which operates a large plant at Georgetown, is considering the question of building a railroad from Mt. Pleasant to a point on the Santee river. The route, it is stated, will be surveyed this coming fall or winter. The company owns extensive tracts of valuable timber lands between Mt. Pleasant and the Santee river, and the object in building the road is to haul timber from along the line to the river and float it down the stream to the mills at Georgetown. The length of the road, it is understood, will be about forty miles.

Savannah.

[From our own Correspondent.]
Savannah, Ga., August 19.

There has been a more active demand for lumber during the past week, and the market already seems to show indications of considerable activity during the coming fall and winter months. The present de-

mand for lumber is now quite pronounced, and Georgia pine at Northern and Eastern points is in good request. Prices all along the line are firmer, and at the next meeting of the Georgia Saw-Mill Association, which will be held at Tifton next week, it is expected that a slight advance will be made in a number of grades. The mills of Southern Georgia have now all the orders they can handle for the present year, and offers and inquiries are out for more than can be handled with the mills running at their full capacity. During the past week the shipments of lumber from this port amounted to 3,480,000 feet. The situation at Brunswick and other ports of Georgia is very satisfactory, and the movement, both among domestic and foreign shippers, continues to show remarkable activity. At St. Simons and other milling sections in the interior the stocks of lumber are not showing any accumulation, shipments being made almost as soon as the lumber leaves the saw. Lumber and timber freights are very steady, with rates to coastwise and foreign ports unchanged.

Mobile.

[From our own Correspondent.]
Mobile, Ala., August 19.

The tropical storm which came up out of the South on Wednesday last and increased in force during the day, reached its maximum about 6 P. M. on Thursday. Very little business was done on Friday, and the total transactions of the week amounted to a trifle. There was an immense amount of drift wood, sawn timber and logs piled upon the river front by the incoming waters, where it was left high and dry when the waters receded during the night. Aside from damage to wharves, vessels, outhouses and fences, there has been no serious loss, and no loss of life as far as is known at the moment. The week under review has consequently been a very quiet one in timber and lumber circles, and the volume of business in timber is hardly worthy of comment. Sawn timber continues to rule at about 11½ to 12 cents per cubic foot, 40-foot basis, and hewn timber is in light supply and nominally steady. Hewn oak is quoted at 15 to 18 cents per cubic foot, and hewn poplar at 12 to 12½ cents per cubic foot. There is a good demand for ash at \$6 to \$8 per 1000 feet, poplar \$6 to \$8, oak \$8 to \$12 and cottonwood \$4 to \$5 per 1000 feet. Pine saw logs are quoted at \$5 to \$8 per 1000 feet. In lumber all the mills continue to be well supplied with orders, and the output is not showing any decrease. There is now a better demand from Cuba and South America, and during the past week nearly 2,000,000 feet were shipped, nearly 1,000,000 going to Cuban ports. There is a fair demand for all grades of lumber, the choice grades being exceptionally firm. The offering of vessels for the carrying trade is moderate, and rates are steady. The British steamer Norwood was taken during the week to load here with lumber for Rosario at \$17, \$2 form, and the schooner Wellfleet, 497 tons, from Apalachicola to Boston with lumber at \$7.50.

Memphis.

[From our own Correspondent.]
Memphis, Tenn., August 19.

There has been quite a marked improvement in the demand for the various hardwoods in this market during the past week. The improvement has been general. There have gone forward a number of cars of oak, especially plain and quartered white. There has been some foreign business in ash, too, which seems to be more wanted. The price position of the foreign division has improved, as well as the demand. In the domestic market some of the items have begun to move with some freedom. This is especially

true of the oaks. Ash has moved with considerable freedom. Poplar has felt the improvement, too, and large shipments of this wood have either been booked or shipped during the week, especially in the dressed stock. Gum still insists on being slow, while cottonwood in the lower grades has failed to move materially from the dull condition in which it has been for some months. Cypress has constituted the readiest mover. Prices are ruling with considerable firmness. The factories consuming hardwoods are reported to have very small stocks on hand. The rail mills are fairly well fixed so far as logs are concerned. The mills handling the building woods are having all they can do, and the firms which handle this output are rushed with orders, the demand being still of a record-breaking character. The building permits still continue to show a handsome increase over the corresponding period last year.

Beaumont.

[From our own Correspondent.]
Beaumont, Texas, August 17.

The effect of the recent spurt in the demand for lumber has been to materially advance prices, and several of the mills at this time are engaged in revising their price-lists and issuing new ones with higher figures. One list that will be issued the coming week will show an advance of \$1 per M feet on such items as flooring, ceiling, siding, partition, etc. There is a tendency to advance on all classes of timber. Boards on the new lists will be quoted as high as \$19. These advances, it must be remembered, are being made just at the beginning of the Texas season, and if the demand keeps up for the remainder of the year, of which there is every probability, there will be further advances before the first of next January. Business from Texas the past week has been splendid. Already there is beginning to be serious delay in getting the orders shipped out, caused from a lack of stock. An order will be for a carload of mixed stock, and the entire order will perhaps be held back on account of the lack of one item. The mills are doing the best they can, but with the depleted stocks on hand it is difficult for them to fill orders promptly, particularly those calling for a diversity of material. There is some trouble already with the car shortage, as all the cars desired cannot be obtained promptly. There is a fair demand for stock from the Western buyers, but there has not been much business transacted in this line, for the reason that the mills have not the stock to ship there. The last two weeks has brought a good demand from the Southern Louisiana dealers, resultant from the very good prospects there are of a good rice crop. The local sales by wagon and car shipments to the surrounding towns in this county amount to 2,000,000 or 3,000,000 feet a month, which is all consumed by not more than a population of 20,000 people. The railroads continue to be active buyers of lumber, and some of them want a great deal. One road in the State is now endeavoring to buy 3,000,000 feet of timber, but claims the prices are too high. The export business shows no sign of life, and, with the exception of Mexican and Atlantic seaboard business, there is nothing whatever being done in this line. There does not seem, at this end of the line, to be any prospect for immediate improvement.

Lumber Notes.

Receipts of lumber at the port of New Orleans for the week ending the 16th inst. amounted to 2,273,500 feet.

The saw-mill of the Dixie Lumber Co., one of the largest mills at or near Mobile, was carried away by the storm last week.

The J. D. Gambrill Lumber Co., located at Taylorsville, Smith county, Mississippi, has been chartered, with a capital stock of \$20,000.

A charter was granted last week to the Williams-Sykes Furniture Co. of Norfolk, Va. The capital stock is \$25,000, and H. J. Williams is president.

The Ives Lumber Co. of Houston, Texas, has been chartered, with a capital stock of \$25,000. The incorporators are J. I. Campbell, J. Lee Campbell and Y. W. McNeil.

The Carroll shingle mill, on the banks of the river, three miles below Beaumont, Texas, was destroyed by fire on the 14th inst. The plant was valued at \$6000, with insurance \$3500.

It is stated that the big lumber plant of the Sullivan-Alger Lumber Co. at New Century, Fla., will be running early in October. Most of the output will be shipped via Pensacola.

The Hampton Sash, Door & Blind Co. at Hampton, Va., whose plant was recently destroyed by fire at a loss of \$40,000, has just rebuilt its plant, and will resume operations this week.

The Wiltz Veneer Co. of Norfolk, Va., has been chartered, with a capital stock of \$50,000. The company will manufacture veneer wood and other wood products. J. P. Wiltz is president of the company.

Reports from the Clinch, Emory and Powell rivers in Tennessee state that a monster log float has started south, and that Chattanooga may expect to receive on this rise from 5,000,000 to 6,000,000 feet of logs.

The Queen & Crescent Lumber Co. of Bay St. Louis, Miss., has increased its capital stock from \$100,000 to \$200,000. The Tallahalla Lumber Co. of Columbus, Miss., has also increased its capital from \$100,000 to \$300,000.

G. B. Murrell & Co. of Morriston, Fla., have recently added two and one-half miles of track to their tramroad, which connects with a fine tract of timber land. The company's saw-mill is running on full time, and has a capacity of 30,000 feet of lumber per day.

The Graham Shingle Co. at Snowville, Va., after a two weeks' shut-down, has again resumed operations, and is now cutting 20,000 shingles per day. The management is considering the question of running the plant day and night in order to meet the demand for its shingles.

A general selling agency of the Canda Lumber Co. and the Ensign-Oskamp Co. of Worth and Ocilla, Ga., respectively, is about to be established at Tifton, Ga. Mr. T. S. Williams has been appointed selling agent for the output of these mills, which is over 100,000 feet of lumber a day.

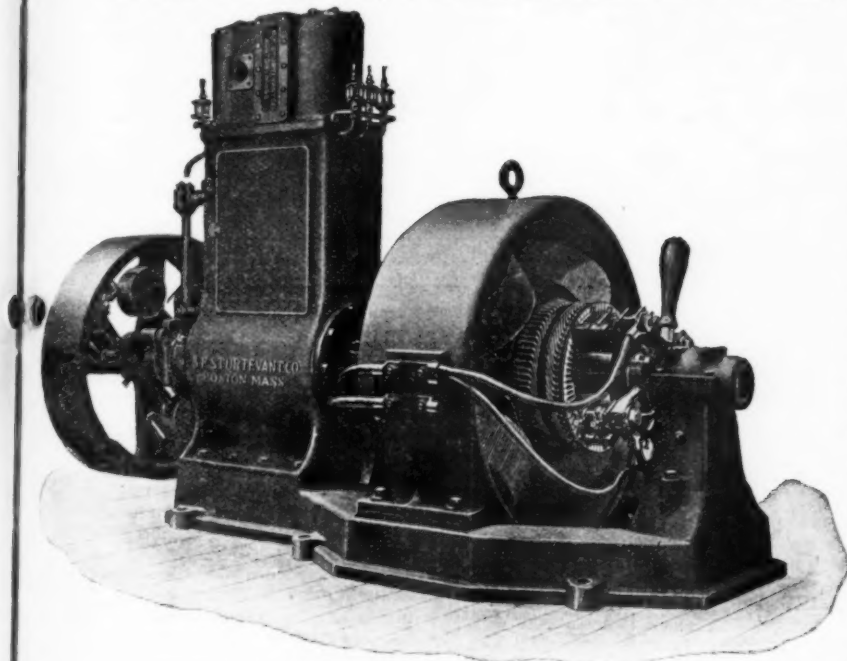
The Cumberland river at Burnside, Ky., last week was the highest water ever known, having fifty feet of water in the channel. The Buffalo Tie Co. lost 6000 ties by the breaking of its boom at Caney Branch, also five large barges valued at \$12,000. Twenty thousand logs came down the river on the 15th inst.

A close compact between all the turpentine operators in Georgia, Florida and Alabama was effected last week in Jacksonville, Fla. Sixty operators were present at the meeting, and it was agreed that another meeting should be held September 11 for the purpose of completing an organization of all the naval-store manufacturers in this country. The organization is said to be for mutual protection, especially in the control and management of labor in the turpentine fields, it being contended that this labor is becoming unmanageable.

MECHANICAL.

A Sturtevant Generating Set With Enclosed Compound Engine.

A distinctive feature of small and medium sized generating sets is the compactness which is secured in late designs.



STURTEVANT GENERATING SET WITH ENCLOSED COMPOUND ENGINE.

Herewith is illustrated one which possesses some distinctive features of novelty. The running gear of the engine is entirely enclosed, all parts are oiled from sight-feed oiling devices on the exterior, and access to the interior is provided through a tight-fitting door. The engine is of the compound vertical type, and its general appearance is very similar to the double vertical engine of the same company, the B. F. Sturtevant Co. of Boston, Mass., by which a line of these generating sets is now being built from its own designs. The engines range from a 4-7x4 up to a 8½-15x7. The cylinders are in a separate casting from the frame to which they are bolted, thus rendering them easily removable for repair. Two valves are employed, one controlling admission of steam to each cylinder, and motion is transmitted through a rocker provided at its outer end with an accurately fitted ball-and-socket joint, and at its inner end connected by link to the valve stem yoke. The cylinders are thoroughly lagged to prevent condensation, and danger of damage from water in the cylinders is avoided by the use of special automatic relief valves.

The generator is of the standard four-pole Sturtevant type, with magnet frame of special magnet steel with field cores cast on. To these the pole shoes are secured by cap screws. The armature is of the barrel-wound toothed-drum type. Ventilation is effected by the use of specially-constructed air ducts between the laminae of the core. These convert the armature into a blower and create a strong draft through the windings. The winding for low-voltage machines is of copper bars with easy bands. High-voltage machines are wire-wound with machine-formed coils. The commutator consists of drop-forged segments of pure copper secured between cast-iron flanges of spider construction, which allow free circulation of air.

All machines are fitted with carbon brushes mounted in holders of the sliding-socket type. The field coils are double cotton covered, and are rendered absolutely oil and water proof by saturation in a special compound and subsequent

baking at high temperature. The armature is subjected to a similar treatment.

All machines are given a full-load test for a sufficient time to bring every part to its maximum temperature, which never exceeds 40° Cent., and are guaranteed to carry full-rated load for ten hours without sparking at brushes or overheating.

what emblematical of the American Blower.

The company has another feature which attracts a great deal of attention, being a model of its widely-known and very successful "Moist-Air" Dry-Kiln. This model has a glass side, enabling the spectator to see the exact operation of the kiln.

They also have a large 140-inch full-housed steel-plate fan running, being driven by an 8x8 marine-type vertical engine coupled direct to the fan shaft. From the discharge of this fan, which points upward, they have myriads of yellow and blue ribbons streaming up into the air. These colors, of course, are the college colors of the University of Michigan, and no Michigan college graduate goes by without noticing it, and it likewise always attracts a great deal of attention from the ladies. In the wall back of the exhibit they have fitted a 108-inch disc fan, which is about as large as one commonly sees in such a place. It is by no means the largest they build, however. They are exhibiting a Moorehead automatic return steam trap in operation, which clearly shows how the trap drains condensation from heating surfaces and delivers it direct to the boilers. There is also a large pressure blower mounted on a Z iron base, on the other end of which is the vertical automatic high-speed engine for driving same. A horizontal automatic high-speed engine, a vertical low-pressure engine, as well as their widely-known A B C exhaust fans, are displayed as well. The adjustable features of these have been so frequently enlarged upon that further mention is hardly necessary here. The exhibit is well worth the investigation of anyone, and all are welcome to make this exhibit their headquarters.

Literary Notes.

The World's Work for September contains the strikingly interesting story of one of the most notable achievements

To lovers of country life and the growing of plants and fruits two articles, one about the Arnold Arboretum, by Sylvester Baxter, and the other concerning Luther Burbank and his remarkable experiments, by Liberty H. Bailey, both handsomely illustrated, will appeal to lovers of outdoor work. William H. Hunt writes of the condition of civil government in Porto Rico, and there is a description of the famous journey of the Philippine Commission in establishing civil government.

Cassier's Magazine of illustrated engineering has the following articles in its September number: "The Comstock of Today," by T. A. Rickard; "The Glasgow Exhibition," by W. D. Wansbrough; "The Tool, the Machine, the Man," by W. H. Smyth; "The Measuring Machine in the Workshop," by Prof. John E. Sweet; "Machine Tools at the Glasgow Exhibition," by Joseph Horner; "The Evolution of Standards of Measurement," by John A. Brashear; "From Logs to Paper," by Alton D. Adams; "Industrial Consolidation," by Charles R. Flint.

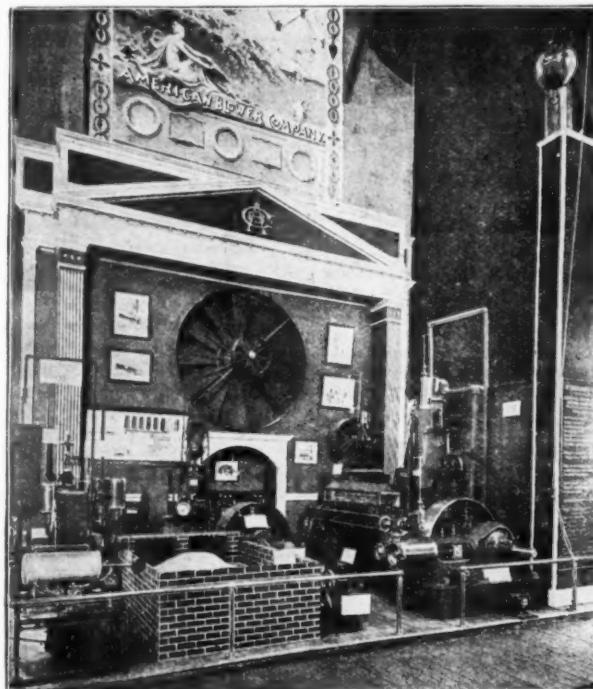
University School for Boys.

The University School for Boys of Baltimore opens for its twenty-second year on September 26 under the charge of its founder, Mr. W. S. Marston. Mr. Marston has done more than any other one man to raise the character of the private schools in Baltimore. Twenty years ago most of such schools occupied portions of houses built for private dwellings, in which the boys were crowded during school hours. Playgrounds and gymnasiums were few, and little provision was made for anything beyond the mere hearing of lessons. In erecting the special building for the University School on Madison avenue, though it was small, every care was bestowed upon proper light and ventilation. Three years ago buildings were erected at a cost of nearly \$70,000 which are not rivalled by those of any private day school in the South, and indeed are unsurpassed by any private schools in any city in the whole country. The masters are all men who have proved their ability as teachers, and represent many of the leading universities. The record of the school is an enviable one. It has prepared nearly 300 boys for the Johns Hopkins alone, and a large number for other universities, colleges and scientific schools. At the present time it has representatives at the Johns Hopkins, Harvard, Yale, Princeton, Cornell, Lehigh, Haverford, Swarthmore, the Massachusetts Institute of Technology and the Stevens Institute of Technology. Last June it had successful candidates for admission at six of the above institutions. This shows the varied character of the work that is done. Pupils are taken from the age of seven until they are ready for college. The lower school, being preparatory to the upper, is an organization by itself, so that the younger boys receive fully as special personal attention as the older ones. The whole school is under the personal care of Mr. Marston.

At the Pan-American.—One of the features of the Pan-American Exposition is the display of the International Correspondence Schools of Scranton, Pa. It is arranged in three departments, one of which contains complete sets of bound volumes and cards showing samples of student work, as well as photographs of various departments of the schools. Above the exhibit is the title in large brass letters, "International Correspondence Schools, Scranton, Pa." Another interesting feature is an electrical outfit. Taken altogether, the display is not only attractive, but gives one an idea of the valuable course of instruction which this institution affords.

American Blower Co. at the Pan-American Exposition.

In Block No. 26 of Machinery Hall at the Pan-American Exposition is an exhibit of heaters, fans, engines, blowers, dry-kilns, trucks and other machinery, which is quite interesting and well worth the few minutes' time necessary to inspect it by anyone who has use for such machinery. Almost everyone is interested in this particular line, as these de-



AMERICAN BLOWER CO.'S EXHIBIT AT PAN-AMERICAN EXPOSITION.

vices enter into almost all lines of manufacture in some way or other. The booth of this company has put up is one of the handsomest in the building. The general scheme is rendered in ivory white and deep green. This feature is some twenty feet in height, being topped by a gable-end resting on some very prominent columns. Above is a large painting nearly sixty feet in height, designed to be some-

American industry has ever accomplished. How the famous Gokteik viaduct was built near Mandalay, of American-made material, according to an American estimate, by an American company, is told by J. C. Turk, who was the engineer in charge of the construction, and the article is finely illustrated by photographs taken in India by the author. And the magazine has many other interesting features.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Birmingham—Furniture Company.—Chartered: Excelsior Furniture Co., with capital of \$1000, by G. B. Bates, Mary O. Bates, W. L. Kelly and others.

Birmingham—Iron-bedstead Factory.—L. C. Brunkmeyer, P. Kavanaugh, J. S. Trott, C. E. Fisher and Escar Floyd have incorporated Iron Bedstead Manufacturing Co., with capital stock of \$10,000, and will erect factory.

Birmingham—Cold-storage Plant, etc.—Alabama Brewing Co. will build a cold-storage plant of 4000 tons capacity at a cost of \$25,000, and plans are now being prepared; also will double its brewery to 60,000 barrels.

Birmingham—Cold-storage Plant.—Birmingham Ice Factory Co. will erect a cold-storage plant of 4000 tons capacity. Eugene S. Kinkle of Chicago will prepare the plans.

Blount Springs—Ochre Beds.—Peyton H. Moore proposes to develop ochre beds and prepare material for market.*

Davidston—Flour Mill.—Rufus Berry will erect a flour mill.

Gadsden—Pipe Works.—L. C. Gulce, A. T. Stocks and J. C. Tolson are soliciting subscriptions to the proposed \$25,000 pipe-works company.

Huntsville—Lumber Mill.—Alabama Lumber Co. will rebuild at once its sawmill reported lately as burned at Byrd Springs.*

Macon—Flour Mill.—S. R. Jaques & Co. will build a flour mill.

Mobile—Hardware Company.—N. R. Clarke, L. C. Dorgan, Jr., and T. O. Goodbrad have incorporated Dorgan-Goodbrad Hardware Co., with capital stock of \$10,000.

Opelika—Water-works.—J. P. Miller & Co. have received contract and will at once commence to construct \$25,000 water-works for city.

Talladega—Ice Factory and Bottling Works.—The Talladega Ice Co. has been purchased by an Atlanta (Ga.) party, who will improve and add new machinery to double present capacity; will also add bottling works. Address Talladega Ice Works.*

Tuscaloosa—Iron Furnace.—It is reported that the Central Iron & Coal Co. will build an iron furnace upon the completion of the

Mobile & Ohio Railroad extension now being surveyed.

ARKANSAS.

Austin—Mineral Developments.—Board of Trade, S. M. Hall, president, is negotiating with parties who desire to invest \$100,000 in developing mineral lands and establishing industrial plant.

Gentry—Cannery and Cold-storage Plant.—Chartered: Gentry Canning & Cold Storage Co., with capital stock of \$8000, by R. J. Maxon, president; J. F. Stillman, vice-president, and C. C. Van Horn, secretary.

Monticello—Cotton Mill.—Anderson Cotton Mills, previously proposed, has fully organized and commenced erection of buildings; capital stock is \$80,000. Maj. W. M. Anderson is interested.

Ozark—Telephone System.—Organized: Home Telephone Co., with W. M. Qualle, president; G. W. Russell, treasurer, and Tom Carter, secretary.

Ozark—Telephone Company.—Home Telephone Co. has been incorporated, with capital of \$5000, by W. M. Qualle, Tom Carter, Geo. W. Russell and others.

White Cliffs—Portland Cement Works, etc. L. Heymiller, Kansas City, Mo., can be addressed regarding purchase of the White Cliffs Lime & Portland Cement Co.'s plant and business reported last week.

Yellville—Electric Plant and Water-works. Yellville Electric Light & Power Co., previously reported incorporated, will construct system of water-works and electric lights; W. F. Cleveland, president.

FLORIDA.

Fort White—Knitting Mill.—It is proposed to establish a knitting mill for hosiery, and C. H. Thompson can give information.*

Jacksonville—Supply Company.—Florida Building Supply Co. has been incorporated, with capital stock of \$10,000, for manufacture of all kinds of building materials, by Edward Anderson, Samuel A. Marshall and W. A. Cox.

Lake City—Knitting Mill.—The establishment of a knitting mill is in contemplation. M. M. Scarborough, secretary Board of Trade, can give information.*

Pensacola—Music Company.—Chartered: Clutter Music House, with capital stock of \$20,000, by John M. Clutter and others.

Tallahassee—Drug Company.—W. H. Mook and others have incorporated Florida Mutual Drug Co., with capital stock of \$100,000.

Tampa—Road Improvements.—"County Commissioners" are considering a proposition to issue \$400,000 in bonds for road-paying purpose.

GEORGIA.

Atlanta—Telephone Company.—Standard Telephone Co., 104 Edgewood avenue, will remodel and improve its entire plant, installing new machinery, etc., at a cost of \$8000.

Atlanta—Furniture Factory.—Ware Furniture Manufacturing Co., reported last week, has paid in capital stock of \$100,000 (not \$10,000, as erroneously given last week), and plant is now being built. Sprinklers, elevators, steam heat, dry-kiln, etc., will be installed. Plant will cost \$85,000. Office at 2 to 10 Fourth street.*

Blue Ridge—Laundry.—Blue Ridge Steam Laundry, reported last week, is about completed, plant costing \$1000; E. B. Garwood, manager.

Brunswick—Sugar Refinery.—Board of Trade is endeavoring to locate a sugar mill and refinery.

Camilla—Telephone System.—T. R. Bennett, L. A. Bush, M. E. Bush and F. L. Lewis have applied for incorporation of Camilla Telephone Co. Telephone franchise has been secured.

Fitzgerald—Brick Works.—J. D. Brown and W. L. Holmes will establish brick works of 40,000 capacity daily.

Gainesville—Lime Kilns.—Hall County Hydraulic Lime Co. has completed kilns for a daily capacity of 250 bushels of lime.

Gainesville—Water-power Development, Electric Plant, etc.—Gainesville & Dahlonega Electric Railway Co. has purchased for \$29,000 the Dunlap water-power, embracing 750 acres of land. Bonds for \$750,000 will be issued to pay for development of the power, erection of electric plant, etc. Lighting franchise may also be applied for. It is said that a dam to develop 5000 horse-power will be built at once.

Lake Park—Mercantile.—Incorporated: Pridgen Company, capital stock \$5000, for mercantile purposes, to deal in and manufacture naval stores, etc., by A. Pridgen, C. G. Wiggins and David Faircloth.

Lumpkin—Water-works.—City recently voted \$100,000 for construction of water-works. All material has been ordered, and H. R. Teal is drilling the artesian well.

Rome—Bobbin Factory.—North Carolina capitalists have addressed the Board of Trade relative to locating a bobbin factory.

Waycross—Planing Mill.—T. S. Singleton has purchased and will operate the Murphy Planing Mill of 15,000 feet capacity and valued at about \$8000. Soon machinery will be installed to double plant.*

Waycross—Sewerage.—"Sanitary and Water-Works Commission" will extend city's sewerage system, as reported lately, using best grade of 18-inch pipe. Details will be ready soon; R. P. Bird, clerk of council.

KENTUCKY.

Coffman—Coal Mines.—Green River Mining, Manufacturing & Transportation Co. is developing coal lands and mines purchased recently.

Eubanks—Oil Wells, etc.—Chartered: Eubanks Oil, Gas & Mineral Co., capital stock \$25,000, by T. W. Donnelly, W. H. Henderson, A. H. Smithers, G. W. Oliver and others, for development of oil, gas and mineral lands.

Louisville—Telephone Building.—Louisville Home Telephone Co. has had plans made by J. J. Gaffney for erection of and commenced work on a three-story brick and stone building to cost \$30,000; also let contract for switchboard of 12,000 capacity, with 6000 installed.

Louisville—Shirt Factory.—Frank Jones of Chippewa Falls, Wis., has addressed the Commercial Club relative to removing his 50-machine shirt factory, with electrical power, to Louisville.

Mayfield—Ice Plant.—People's Ice & Coal Co., reported incorporated last week with \$20,000 capital, contemplates erecting ice plant.*

Midway—Lead Mines.—J. C. & D. M. Chennault of Richmond, Ky., have leased and will develop lead properties at Midway.

Paris—Sewerage System.—The city will extend sewers about three miles. Benj. Thompson of Chattanooga, Tenn., is engineer for work; D. C. Parrish, chairman of committee.*

Richmond—Cigar Factory.—Central Kentucky Cigar Manufacturing Co. has increased its capital from \$1000 to \$4000.

Winchester—Oil Wells.—Clark County Oil & Development Co. is obtaining lands for oil developments. Ben A. Ogden is local agent.

LOUISIANA.

Abbeville—Electric-light Plant.—Albert G. Nauch of New Iberia has been granted franchise for erection of electric-light plant at Abbeville.

Hornbeck—Cannery.—Harry Morton is endeavoring to organize a co-operative cannery.

New Orleans—Boiler Works.—Payne & Joubert will install compressed-air plant and tools in their boiler works.*

New Orleans—Street Paving and Sewerage.—City Engineer W. J. Hardee has prepared plans and specifications for paving St. Charles street, the plans containing also the specifications for sewerage and drainage pipes.

New Orleans—Pottery.—It is stated that a pottery will be established on lands recently sold through W. C. H. Robinson and Felix J. Dreyfous.

Sulphur—Realty Company.—Chartered: Sheldon-Lyons Realty Co., with capital stock of \$100,000, by S. M. Lyons, C. M. Sheldon and others.

Sulphur—Oil Wells.—Chartered: Calcasieu Parish Oil Co., Limited, with capital stock of \$250,000, by S. M. Lyons, D. B. Gorham, C. M. Sheldon and others.

Sulphur—Oil Wells.—Chartered: Lyons Oil Co. and the Sheldon Oil Co. have been incorporated, with capital stock of \$300,000 each, by C. M. Sheldon, S. M. Lyons and others.

Sulphur—Oil Wells.—Chartered: Sulphur-Louisiana Oil Co., with capital stock of \$250,000.

Westlake—Oil Wells.—Geo. B. Maegly of Kansas City, Mo., represents capitalists who propose drilling for oil near Westlake.

MARYLAND.

Baltimore—Shipyards, etc.—It is reported that stockholders in the United Fruit Co. of Boston have arranged to secure controlling interest in the Structural Iron & Steel Co. at Baltimore and add a shipbuilding plant to the works. W. T. Stilwell is president of local company.

Baltimore—Mining and Milling.—Gold Star Mining & Milling Co. has been incorporated, with capital stock of \$50,000, by John H. Buxton (office in Manufacturers' Record Building), S. W. Register, Chas. E. Oberham and others.

Baltimore—Macaroni Factory.—John C. Pund, Jr. (office, Gay street, near Mott), E. G. Staley, David C. McGraw and others have incorporated Maryland Macaroni Works, with capital stock of \$10,000, for the manufacture of macaroni, etc.

Baltimore—Vitrified-brick Works.—Baltimore Vitrified Clay Co., reported during the week as incorporated with \$500,000 capital stock, has elected Horace Singluff, president, and E. K. Legg, secretary-treasurer. Others interested are Clark S. Edwards of New York and Gardner Kimball of Wilmington, Del. Company has purchased 125 acres of land, on which it will build a vitrified-brick plant to cost about \$150,000.

Baltimore—Oysters.—Geo. S. Cripps and others have incorporated Geo. S. Cripps Co., capital \$1000, to deal in oysters.

Baltimore—Rubber Factory.—Andes Rubber Co., capital stock \$2,000,000, has been incorporated to develop rubber lands in Peru and Bolivia, and it is said contemplates a factory in Baltimore. Henry A. Parr, N. P. Bond, Thos. F. McGlone and E. P. Hill are interested.

Berlin—Coal Mines.—Niver Coal Co. of Baltimore has purchased 230 acres of land near Berlin for \$15,000 as site for industrial town. Coal mines will also be opened, and shafts are now being sunk. Another tract of seventy acres of coal land has been bought for \$5000.

Cumberland—Brewery.—Cumberland Brewing Co. states that its improvements, noted last week, will include 20,000-barrel storage cellar, washhouse, racking-room, keg-scrubbing machinery, etc. L. Schreiber Sons Co. of Cincinnati is preparing the plans.

Frederick—Manganese Mines.—Chartered: Cedar Creek Manganese Co., with capital stock of \$50,000, and S. T. Haffner, president; Henry P. Fahrney, secretary.

Hagerstown—Harness Factory.—Maryland Leather & Saddlery Co. has been incorporated, with capitalization of \$10,000, secured building and is equipping plant; Edwin H. Funk, president, and W. S. Smith, secretary-treasurer.

Hagerstown—Silk Mill.—Collinge & Nolan Company of Paterson, N. J., has definitely decided to rebuild its Hagerstown branch, recently burned; \$10,000 building, lately reported, will be erected; \$35,000 worth of machinery will be installed. Frederick G. Burger has contract to erect building.

Laurel—Flour Mill.—Millard F. Schooley will build a flour mill of fifty barrels capacity daily; has purchased site.

Rockville—Lighting Plant.—Town council has appointed W. W. Welsh to make inquiry into methods of town lighting other than electricity.

Washington, D. C.—Medicine Factory.—Chartered: Zea-Cura Company, with capital of \$1000, by Minnie M. Harris and associates.

MISSISSIPPI.

Greensboro—Chartered: Johnson-Hall Co., with capital stock of \$35,000, by W. T. Johnson, R. Thayer, R. L. Hall and others.

Jackson—Cotton Company.—Chartered: Reed-Smith Cotton Co., with capital stock of \$5000, by D. W. Reed, R. C. Smith, W. A. Gunning and others.

Jackson—Cotton Factors.—Chartered: Reed-Smith Cotton Co., capital stock \$5000, by D. W. Reed, R. C. Smith, W. A. Gunning and others, to deal in cotton.

Mississippi Springs—Oil Wells.—It is reported that Chicago parties have leased large tracts of land at Mississippi Springs and will bore for oil. A. C. Jones, D. L. Lewis or J. W. Dotson at Raymond, Miss., may possibly give information.

Taylorsville—Lumber Company.—Chartered: J. D. Gambrell Lumber Co., with capital stock of \$20,000.

Taylorsville—Lumber Mill.—J. D. Gam-

brell, J. P. Meyer and C. S. Meyer have incorporated J. D. Gambrell Lumber Co., with capital stock of \$20,000.

Yazoo City—Electric Plant, Water-works and Sewerage.—Capt. W. D. Pugh, representing a number of parties, has made the city a proposition to construct water-works, sewerage system, electric plant, etc.

MISSOURI.

Fairfield—Water-power.—P. R. Whray is reported as to build new dam and install power plant for flour mill.

Kansas City—Mining.—Commercial Mining Co., capital stock \$10,000, has been incorporated by M. H. Hudson, A. Judah and Walter M. Jackard of Kansas City, and T. C. Jones of Webb City.

Kansas City—Electric-light Plant.—City will hold an election in October to vote on issuance of \$300,000 of bonds for erection of an electric-light plant. Address "The Mayor."

Kansas City—Bridge.—Union Depot, Bridge & Terminal Co. is said to have in view the early erection of three-deck and double-tracked bridge across the Missouri river, and that the plans are about completed. Theo. C. Bates of Worcester, Mass., is president.

Kansas City—Mining.—Chartered: Commercial Mining Co., by Nallville H. Hudson, A. Judah, Walter M. Jackard and others, with capital stock of \$10,000.

Keytesville—Mining.—Chartered: Charlton Mining Co., capital stock \$20,000, by J. C. Wallace, Henry B. Richardson, C. B. Crowley and others.

Kohoka—Electric-light Plant and Water-works.—City has voted \$12,300 of bonds for erection of electric plant and construction of water-works; G. W. Henry, city clerk.

St. Joseph—Electric Plant.—City is considering improving its electric plant at a cost of \$32,000 or selling for \$150,000. Address "The Mayor."

St. Joseph—Surgeons' Supplies.—Chartered: St. Joseph Physicians & Surgeons' Supply Co., capital stock \$10,000, by Wm. F. Grete, Amelia N. Grete and Wm. H. Schroeder.

St. Joseph—Stockyards.—St. Joseph Stockyards Co. has purchased ten acres of land at \$25,000 on which to erect additional buildings for its plant.

St. Louis—Coal Company.—Chartered: Allen-Whittemore Coal Co., by Edwin R. Allen, Benj. M. Whittemore and Alice G. Whittemore, with capital stock of \$5000.

St. Louis—Smelting Plant.—Federal Steel Co. (office in Union Trust Building) intends to build a smelting plant near St. Louis, but details have not yet been decided.

St. Louis—Pharmacy.—Chartered: Sidney Street Pharmacy, capital \$2000, by Robert F. Miller, Erwin J. Koerberlin and Edw. Wenger.

St. Louis—Foundry.—McDonald Foundry Works will erect foundry building to cost about \$20,000.

St. Louis—Coffee Company.—Chartered: Union Coffee Co., capital stock \$7000, by Jas. M. Sutherland, Robert Jeffrey and J. C. Rankin.

St. Louis—Plow Works.—It is reported that Dr. R. J. Gatling and others will organize a \$1,000,000 company to establish works for making a new plow invented by Gatling.

St. Louis—Paper-bag Company.—Chartered: Great Western Paper Bag Co., capital stock \$6000, by Gustav F. Wrightman, Fred. E. Drews and Agnes A. Voightman.

NORTH CAROLINA.

Candor.—Iola Mining Co. has been organized, with capital stock of \$1,000,000, to develop gold-mining property just purchased from Milton Jones and Westcott Roberson of High Point. Mention of this company was made last week under Biscoe.

Gumberry—Saw-mill, etc.—Trenchard Bros. & Westcott have purchased saw-mill and timber lands, and will develop plant. Chas. T. Westcott, care of International Trust Co., Baltimore, Md., can probably give particulars.

Hickory—Flour Mill.—Phoenix Mills will improve and remodel plant.

High Point—Furniture Factory.—A company for the manufacture of trunks has been organized, with capital stock of \$15,000, and W. H. Ragan, president; M. J. Wrenn, vice-president, and E. L. Ragan, secretary and treasurer.

Kings Mountain—Cotton Mill.—Bonnie Cotton Mills, recently completed with 4300 spindles, will install 1000 more spindles and add spindles later to fill building.

Magnolia—Flour Mill.—F. T. Rackley will improve his water-power flour mill.

Raleigh—Cotton Mill.—The rumor lately mentioned as to doubling the Neuse River

Mills was not correct; the company is installing some additional machinery, however. Plant has now 5000 spindles and 150 looms.

Raleigh—Shops.—Seaboard Air Line, J. M. Barr, vice-president, will probably increase capacity of its shops.

Salisbury—Copper Mine.—Chicago parties have purchased for \$20,000 copper lands comprised in 392 acres near Salisbury. Col. E. Marion, United States pension agent at Chicago, represents the buyers.

Wilson—Printing Plant.—P. D. Gold & Sons are erecting building, which they will equip as printing plant.

SOUTH CAROLINA.

Batesburg—Laundry.—Chartered: Perfection Steam Laundry Co., with capital of \$1000, by G. B. Timmerman and others, to establish steam laundry. Machinery has been bought.

Charleston—Printing Plant.—Chartered: Charleston Electric Printing & Lithograph Co., capital stock \$10,000, by Julius J. Wetmore, Ralph McLendon and C. B. Northrop.

Darlington Cotton Mill.—It is reported the Darlington Cotton Mills will increase from 800 to 1400 looms.

Easley—Cotton Mill.—Easley Cotton Mills, reported lately to increase capital \$50,000, has ordered 2000 additional spindles; now has 12,000.

Gaffney—Cotton-mill Supplies Factory.—Northern parties will build, at a cost of \$25,000, a factory for cotton-mill supplies.

Laurens.—Chartered: Williams-Hughes Company, capital stock \$20,000, by Geo. W. Williams and M. I. Hughes.

Laurens—Furniture Factory.—Laurens Furniture Manufacturing Co. will increase capital stock by \$15,000.

McColl—Educational.—Chartered: McColl Educational Society, capital stock \$5000, by T. B. Gibson and others.

Mt. Carmel—Flour Mill.—Parks & McDonald will build a 50-barrel flour mill.

Rock Hill—Sewer System.—There is talk of a company being organized to construct sewer system.

Spartanburg—Overall and Underwear Factory.—It is proposed to organize company with capital stock of \$20,000 to \$30,000 for the manufacture of work shirts, overalls, drawers, etc. Thos. L. Goff can give information.

Winneshore—Electric-light Plant.—Town is contemplating the installation of an electric-lighting plant of about thirty are and 1000 incandescent lamps. Thos. H. Ketchin, independent, can give information.

TENNESSEE.

Bristol—Flour Mill.—Twin City Mills will rebuild, improve and enlarge plant.

Cleveland—Water-works.—City will hold an election September 23 to decide the purchase of the water-works plant. Address "The Mayor."

Crossville—Coal Mines.—Granite Realty & Investment Co., composed of St. Louis capitalists, is developing coal lands. J. B. Johnson is local manager.

Dickson—Corn Mill.—Myers Bros. & Rogers contemplate adding a corn mill of fifteen bushels capacity hourly.

Gallatin—Phosphate Lands.—G. A. Swift of Chicago has bought the lands and mines of the Gallatin Phosphate Co., and will continue the developments.

Knoxville—Coffin Factory.—Knoxville Coffin Co. will erect additional building and otherwise improve factory.

Knoxville—Coffin Factory.—Hall & Donahue Coffin Co. will establish a coffin factory, machinery having been ordered.

Knoxville—Ice Factory.—Knoxville Ice Co. contemplates installing an additional machine of fifty tons capacity.

Knoxville—Knitting Mill.—Standard Knitting Mills Co. has installed additional machinery.

La Grange—Land Company.—Incorporated: La Grange Land Co., capital stock \$100,000, by John S. Stiles, Herman Just, Frank Walton and others, for improving land, encouraging immigration, establishing industries, etc.

Nashville—Suburb Development.—Belmont Land Co. has arranged with the Nashville Trust Co. for the organization of a company to develop a suburb; several hundred acres will be utilized, water supply will be obtained from city plant, and electricity will be furnished. Wm. Leftwich is surveying the property.

Nashville—Flour-spar Mines.—Incorporated: Tennessee Flour-Spar Co., for mining flour-spar and other minerals, by T. M. Steger, Samuel M. Dickens, Litton Taylor, W.

C. Cherry and W. E. Steger of Smith county.

Springfield—Ice Plant.—Springfield Electric Co. will build an ice plant in connection with its light plant; plans not completed; water to be taken from deep well, and suggestions are requested; H. E. Butcher, manager.

Tullahoma—Tobacco Factory.—Nashville parties have made a proposition to establish cigar and tobacco factory to employ twenty-five hands.

TEXAS.

Alvarado—Creamery.—Chartered: Alvarado Creamery, with capital stock of \$10,000, by J. M. McPherson, Harrison Davis, G. W. Cotter and others.

Beaumont—Oil Reservoir.—Manhattan Oil Co. has decided to construct an earthen reservoir for storing oil with capacity of 1,136,000 gallons; later other tanks will be constructed until capacity for 5,000,000 gallons is reached.

Beaumont—Saw-mill.—Forest Lumber Co. has purchased the saw-mill of W. H. Aldridge, and will use the equipment for increasing its capacity to about 40,000 feet per day.

Beaumont—Brick Works.—Beaumont Brick Co. has been chartered, with capital stock of \$100,000, by Sam Park, A. Babin, R. M. Hollowell, H. D. Fletcher and W. F. Scott.

Beaumont—Asphalt and Refining Company.—Chartered: Central Asphalt & Refining Co., capital stock \$2,000,000, by Charles A. Towne of Duluth, Minn.; Martin Howard of Chicago, Ill.; Stephen M. Scott of Emporia, Kans.; John P. Withers of Beaumont and others.

Beaumont—Tank Factory.—Beaumont Tank Co. has been organized recently by G. W. Eldeiman and C. H. Chambers, and established factory.

Beaumont—Manufacturing.—A. Y. Pearl, architect and engineer, is corresponding with Northern parties who contemplate building manufacturing plants.

Bonham—Mercantile.—H. L. Nunn and others have incorporated Nunn & Jones Company, with capital stock of \$10,000.

Chappell Hill—Creamery.—Chartered: Chappell Hill Creamery Association, capital stock \$10,000, by T. A. Mercer, John Carlisle and R. K. Felder.

Corsicana—Supply Company.—Chartered: Acme Supply Co., with capital stock of \$250,000, by Samuel M. Jones of Toledo, Ohio; J. F. Maxwell of Corsicana, E. M. Reardon of Dallas and others.

Corsicana—Cotton Compress.—Chartered: Western Compress Co., capital stock \$50,000, by O. L. Pataspeick, Jos. Schwartz, Thos. Abraham and W. L. Woods.

Dallas—Gin Machinery Works.—Chartered: Glinners' Machinery Co., with capital stock of \$5000, by William Burr, C. P. Wiggins and Frank Hanseo.

Dallas—Oil Refining.—Dallas Oil & Refining Co. will increase capital stock from \$120,000 to \$180,000.

Denison—Cotton Gin.—Chartered: West Denison Gin Co., capital stock \$7500, by Harry Cash, Courtenay Marshall and W. G. McGinnis.

Denison—Mercantile.—Chartered: Hocker-King Dry Goods Co., with capital stock of \$20,000, by J. W. Hocker and others.

Denton—Cotton Gin.—Planters' Gin Co. has been incorporated, with capital stock of \$10,000, and C. F. Witherspoon, president; P. R. Freeman of Dallas, vice-president, and W. R. Allen, manager.

El Campo—Electric Plant, Water Supply, etc.—Levi Paul of El Campo, R. A. Scott and J. W. Dawson of Orange will build an electric plant to cost \$50,000; power and light will be supplied to industries, power for irrigating 4000 acres of rice lands, and water supply.

El Paso—Oil Wells.—Chartered: Two Republics Oil Co., with capital stock of \$30,000, by J. J. Deiter, Joseph Magoffin, A. A. Kline and others.

El Paso—Saddlery.—El Paso Saddlery Co. has increased its capital stock from \$10,000 to \$20,000.

El Paso—Smelter.—Sunset and Buenos Ayres mining companies of Chihuahua, Mexico, contemplate building a 500-ton smelter in El Paso, plans for the plant being now ready. A separate company with \$750,000 will be organized to own and operate the plant. S. L. Pearce, general manager of the companies, is at present at El Paso; address care Sheldon Hotel.

Ferris—Telephone System.—Malloy & Co. of Ferris and Truitt & Thompson of Bristol will construct telephone line from Ferris to Bristol.

Fort Worth—Real Estate.—Chartered: Fort Worth Real Estate & Investment Co.,

with capital stock of \$25,000, by F. M. Graham, F. A. Fowler and A. J. Beale.

Fort Worth—Water-works.—Daniel W. Mead of Chicago has made a proposition to supply the city 3,000,000 gallons of water daily.

Fort Worth—Saddlery.—Chartered: Kellner-Durrett Saddlery Co., capital stock \$50,000, by C. J. Kellner, E. L. Kellner and H. M. Durrett, for manufacturing saddlery, etc.

Gunter—Townsite.—Chartered: Gunter Townsite Co., capital stock \$50,000, by Joe Gunter, Sam Lazarus and T. Hache.

Hartley—Cattle.—Chartered: The 101 Cattle Co., with capital stock of \$30,000, by S. E. Whitney, H. L. Robinson, C. H. Burnett and others.

Hempstead—Telephone System.—C. A. Horton of Austin has contract to construct telephone system from Hempstead to Prairie View College.

Henrietta—Implement Company.—Chartered: A. C. Thompson Implement Co., capital stock \$15,000, by A. C. Thompson, J. B. Oheim and C. F. Harris.

Houston—Cannery.—Tracy Dunn is in correspondence with a party who offers to form a \$10,000 company to build cannery.

Houston—Lumber Company.—Chartered: Ives Lumber Co., capital stock \$25,000, by J. I. Campbell, I. Lee Campbell and Y. W. McNeill.

Liberty—Oil Wells.—Chartered: Texas, Missouri & Kentucky Oil Co., with capital stock of \$60,000, by Wm. F. Blair, E. B. Pickett of Liberty, T. A. Williamson of Dallas and others.

Llano—Gold Mine.—C. C. Wilson of Fort Worth has bought for \$20,000 the Borden gold mine. He will develop and erect stamp mill.

Marshall—Ice Plant.—Arkansas & Texas Consolidated Ice & Coal Co. (Jeff Hicks of Pine Bluff, Ark., president) will increase capacity of its ice plant to fifty tons per day.

Paris—Drug Manufacturing.—Chartered: First Texas Drug Manufacturing Co., capital stock \$25,000, by M. R. Bruckner, G. W. Smith, C. A. Day and others.

San Antonio—Mining.—Chartered: Jimmie Mining Co., with capital stock of \$150,000, by J. J. Steven, O. S. Newall, C. L. Best and others.

Sonoma—Mercantile.—Chartered: Mayfield Mercantile Co., capital stock \$25,000, by J. W. Mayfield and others.

Terrell—Laundry.—T. B. Elwood is erecting a steam laundry.

Wharton—Electric-light Plant.—G. W. Butzer of Sealy contemplates erecting electric-light plant.

Wharton—Water-works.—Klein Water-Works, damaged by fire during the week, will be repaired and improved with temporary equipment. Other more extensive improvements will be arranged for soon.

Wills Point—Water-works.—John W. Maxey of Houston has received contract for construction of the proposed \$35,000 water-works system at Wills Point.

Winneshore—Electric Company.—Chartered: Chickasha Electric Co., with capital stock of \$30,000, by L. S. Schuter, W. T. Muteman and E. M. Decker.

VIRGINIA.

Alexandria—Gas Plant.—City has awarded contract for the renewal of two gas benches in the municipal plant.

Berkley—Brick Works.—Chartered: Goodman Brick Co., capital stock \$5000 (mentioned last week), has obtained charter. Solomon Goodman is president; Harry Goodman, vice-president, and Hayman Goodman, secretary-treasurer. Plant is now being constructed.

Buena Vista—Fire-clay Works.—T. T. Dickinson & Bro. have purchased the plant and business of the Southern Clay Product Co., will rebuild the plant, modernizing it in various ways.

Disputanta—Saw-mill.—C. H. Bull & Co. of Norfolk are building saw-mill at Disputanta, as reported last week; plant will be operated as the Disputanta Lumber Co., with capital of \$30,000, and have capacity of 30,000 feet of kiln-dried lumber per day.

Harrisonburg—Electric-light Plant.—Town council has named September 2 as date for voting on proposed \$30,000 bonds for electric-lighting plant. Address "Town Clerk."

Newport News—Paving.—City has decided by popular vote to issue \$100,000 of paving bonds, previously reported. Address "The Mayor."

Newport News—Drug Company.—Chartered: McDonough Company, with capital stock of \$10,000, to conduct drug business, by Glenn McDonough (president) and others.

Newport News—Artesian Wells.—Virginia

Artesian Water Co., Thos. B. Henley, secretary, will contract for the drilling of several artesian wells.

Norfolk—Veneer Factory.—Wilts Veneer Co. has been incorporated, with capital stock of from \$25,000 to \$50,000, and J. H. Wilts, president.

Norfolk—Furniture Factory.—Williamson-Sykes Furniture Co. has been incorporated, with capital stock from \$10,000 to \$25,000; H. J. Williamson, president.

Norfolk—Oil Mill.—McNally Manufacturing Oil Co., recently mentioned, states that it has purchased nineteen acres of land as site for its new plant, and is now erecting three-story brick building, which will be equipped with machinery for the production of oil from castor beans, linseed and peanuts. Company has paid-up capital of \$50,000 and bonds for \$30,000.

Norfolk—Drug Company.—Chartered: Terry-Taylor Drug Co., capital stock \$50,000, with J. H. Harwell, secretary.

Norfolk—Publishing.—Chartered: Unionist Publishing Co., capital stock \$10,000, with John T. Whalen, president, and Wm. A. Davis, secretary.

Petersburg—Knitting Mill.—Petersburg Hosiery Co., whose plant was damaged by fire last week, states that new plant will be completed in about thirty days to cost \$7000, making entire cost \$15,000.

Phoenix—Sewerage System.—Town council has passed a resolution recommending an issuance of \$6000 in bonds to construct the proposed sewerage system. N. White is mayor.

Portsmouth—Knitting Mill, etc.—L. B. Whitley states that he and associates have erected building in which to install hosiery knitting machines; also is investigating the manufacture of cotton batting, bags, etc.*

Richmond—Cigar Factory.—S. W. Fuller of New York has obtained contract to erect American Cigar Co.'s proposed factory building; structure will be six stories high, 60x344 feet, costing about \$500,000 when fully equipped; output will be 3,000,000 cheroots annually. Lockwood, Greene & Co. of Boston prepared building plans.

Richmond—Glass Works.—Continental Glass Co. has been organized, with Samuel B. Dunston, president; J. E. Fowler, secretary, and C. F. Sauer, treasurer; capital stock is \$25,000. Site has been bought, and a plant for making cathedral-window and bottle glass will be erected. J. V. Davison, 10 South Twenty-first street, will have charge of plant.

Richmond—Electric Plant.—Virginia Electrical Railway & Development Co. will expend about \$300,000 to enlarge and improve its electric water-power plant, increasing horse-power to 12,000.

Soapstone—Flour Mill.—J. W. McDowell contemplates remodeling flour mill.

Staunton—Evaporating Plant.—Staunton Evaporating Co.'s plant, reported last week, will cost about \$3000, and is to handle apples only.

Tempest—Flour Mill.—Nagolia Mills will remodel plant.

Winchester—Woolen Mill.—Virginia Woolen Co. states that report as to doubling mill is incorrect, but that power plant will be doubled.*

Winchester—Gas and Electric Plant.—Winchester Gas & Electric Light Co. will improve its plant at a cost of \$5000.

WEST VIRGINIA.

Bluefield—Oil Wells.—Green River Development Co. has been organized, with capitalization of \$100,000, to develop lands for oil. Wm. Hicks is president; L. H. Pettyco, vice-president, and W. H. Foutz, secretary-treasurer.

Charleston—Electric Plant.—Willsin Aluminum Co. will erect additional buildings and add machinery for increasing capacity of its electric-power plant.

Fairmont—Coal Mines.—M. L. Hutchinson, Clyde Hutchinson and others have incorporated Hutchinson Fuel Co. and will develop coal mines.

Huntington—Veneering Factory.—Central City Veneering Co. will install additional machinery for increasing capacity.

Plymouth—Coal-mining Plant.—Plymouth Coal & Mining Co. has let contract for the installation of an electrical plant for coal mining and haulage.

Shepherdstown—Electric-light Plant.—City has awarded contract for construction and equipment of electric plant for lighting.

Shepherdstown—Electric-light Plant.—City has given contract to Jacob G. Schaaf Co. of Chambersburg, Pa., for the installation of an electric-light plant.

Wheeling—Oil Development.—American

Oil Producing Co. has been organized for oil developments in West Virginia fields. Address care Sand Fork Petroleum Co.

BURNED.

Alexandria, La.—Well Bros.' ginney. Beaumont, Texas.—Carroll Shingle Mill; loss \$3500.

Brewton, Ala.—Blacksher-Miller Lumber Co.'s plant; loss \$25,000.

Kirbyville, Texas.—Leeton Lumber Co.'s mill.

La Grange, Texas.—Ernest Balzer's cotton gin; loss \$5000.

Pittsburg, Texas.—N. A. Daves' gin and grist mill; loss \$3000.

Waco, Texas.—Waco Steam Laundry; loss \$4000.

BUILDING NOTES.

Abbeville, La.—School.—Town will build a \$10,000 school. Address "Town Clerk."

Abbeville, La.—School.—The "Police Jury" voted an appropriation of \$5000 for erection of school building.

Asheville, N. C.—Depot.—Frank P. Milburn of Columbia, S. C., is about to prepare plans and specifications for Southern Railway Co.'s proposed depot.

Atlanta, Ga.—Chapel.—C. Walter Smith has completed plans for \$3000 chapel for St. Philip's Cathedral.

Bartow, Fla.—School.—Contract for erecting school building has been let. Stuart & Bishop have brickwork and V. M. Hallman has woodwork.

Beaumont, Texas—Office Building.—Thos. Brown has had plans made by W. T. Mills of Columbus, Ohio, for erection of a \$50,000 office building.

Birmingham, Ala.—Hospital.—Hillman Hospital Association is about to let contracts for erecting its \$45,000 building planned by Ullman & Walters.

Birmingham, Ala.—Rectory.—Church of Advent will erect \$10,000 rectory; plans and specifications will be ordered soon; Rev. J. V. Murray, pastor.

Birmingham, Ala.—Office Building.—Southern Railway will rebuild office building after plans by Frank P. Milburn of Columbia, S. C. Address Thos. Bernard, Chattanooga, Tenn.

Catonaville, Md.—Church.—Ghequeler & May of Baltimore are preparing plans for \$9000 stone and frame church building for African M. E. congregation.

Cleburne, Texas—Schools.—City will issue bonds for erecting schoolhouses. Address "City Clerk."

Cooper, Texas—Jail.—County commissioners will proceed to arrange for erecting jail, for which \$6000 bonds were voted recently.

Covington, Va.—Business House.—J. Ernest McClung has contract to erect business house 50x65 feet, with elevators, store fronts, etc., to cost \$3000.

Dallas, Texas—Warehouse.—Kingman-Texas Implement Co. has permit to erect warehouse, seven stories and basement, to cost \$60,000.

De Leon, Texas.—Bids on erection of eight-room brick school building, brickwork and woodwork separately, will be opened August 19. Plans and specifications on file at city secretary's office. Address T. S. Ross.

Dublin, Ga.—Schools.—Town will vote September 9 on issuing bonds for erection of schools. Address "Town Clerk."

Ellisville, Miss.—Hotel.—Chartered: Ellisville Hotel & Lodge Co., capital stock \$10,000.

Ellisville, Miss.—Hotel.—Ellisville Hotel Co. has been incorporated, with capital stock of \$5000, by E. J. Ward, Mulford Parker, N. B. Sheby and associates.

Eminence, Ky.—Warehouse.—Eminence Distillery Co. will erect large warehouse.

Greensboro, N. C.—Building.—N. L. Hanner has received contract for erecting practice and observation building for State Normal and Industrial College.

Houston, Texas—Schools.—Board of trustees of schools will expend \$50,000 for erecting new buildings.

Jackson, Ala.—Bank Building.—A new banking institution will erect two-story brick building; A. M. Wing, president.

Jacksonville, Fla.—Warehouse.—Atlantic, Valdosta & Western Railway has obtained permit for erection of three-story brick warehouse of 105 feet frontage, 12,000 square feet of space, to have two electric elevators, etc. E. C. Long is president. Company has New York offices at 18 Wall street.

Jacksonville, Fla.—Residence.—C. Walter Smith of Atlanta, Ga., has completed plans

for \$6000 residence for erection by Rev. Alblon W. Knight of Atlanta.

Knoxville, Tenn.—Hotel.—Col. Wm. Caswell contemplates erecting a hotel on 140x140-foot lot, to have five stories and 250 rooms, costing about \$150,000.

Lake Providence, La.—Courthouse.—East Carroll parish will vote September 10 on issuing \$16,500 bonds for erecting courthouse.

Laredo, Texas—Jail.—The issuance of \$25,000 of bonds for erection of new jail has been authorized. Address "County Clerk."

Lexington, Ky.—Coliseum.—S. T. Harbison & Co. contemplate erecting a coliseum.

Meridian, Miss.—Jail.—Plans by Krouse & Hutchinson have been accepted for Lauderdale county's proposed \$35,000 jail.

Monterey, Tenn.—Hotel.—Monterey Hotel Co. will erect three-story hotel of 100 rooms.

Mount Washington, Md.—Residence.—Harrison J. Barrett has let contract to Harry M. MacClellan for erection of \$8000 residence.

New Orleans, La.—Hotel.—Sidney Story and associates have incorporated Hotel Royal Co., with capital stock of \$250,000, to conduct hotel.

Newport News, Va.—Courthouse.—City has decided by popular vote to issue \$25,000 of courthouse bonds. Address "The Mayor."

Newton, Texas—Courthouse.—Newton county will vote November 2 on issuing \$25,000 in bonds for erection of courthouse. Address "County Commissioners."

Norfolk, Va.—Residence.—C. R. Parlette has contract to build residence for Dr. Chas. R. Grandy.

Notre Dame, Md.—Building.—Plans have been made and estimates are being taken on erection of a two-story-and-basement addition 65x114 feet, to contain bakery and laundry, for Notre Dame College; cost \$30,000. Geo. Archer of Baltimore is the architect.

Paris, Texas—Depot.—Texas & Pacific Railroad Co. will build \$100,000 depot at Paris.

Pine Bluff, Ark.—Building.—W. S. Helton has received contract at \$15,800 for erection of the Annunciation Academy building, to be two stories, of brick and stone.

Poplar Bluff, Mo.—City Hall and Jail.—W. A. Spencer, city clerk, will open bids August 21 for erection of city hall and jail, according to plans on file.

Portsmouth, Va.—Storehouse.—Griffenbagen & Co. of Chicago have contract for erecting and are about to commence work on ordnance storehouse two stories high, 60x180 feet; contract price \$39,700.

Reidsville, N. C.—School.—"School Committee" will employ a superintendent and erect by day labor the proposed \$15,000 school building; unsatisfactory bids were received, causing this decision.

Richmond, Ky.—Courthouse.—Contract for remodeling Madison county courthouse has been awarded to Bailey & Koener at \$11,490.

Roland Park, Md.—Cottage.—Ellicott & Emmert have completed plans for cottage for A. C. Meyers, and are taking bids on erection.

Shepherdstown, W. Va.—College Building.—S. A. Westenhaber of Martinsburg has received contract at \$30,000 for construction of Shepherd College building, to be 104x157 feet, of brick and stone.

St. Louis, Mo.—Hospital.—Trustees of St. Luke's Hospital are reported as having plans made for erection of additional buildings to cost \$400,000.

St. Louis, Mo.—Mercantile Building.—Stifel Estate has obtained permit to build its proposed \$400,000 mercantile building for occupancy by Norvell-Shapleigh Hardware Co.

St. Louis, Mo.—School.—Ramsey, Wuest & Farney have prepared plans for a \$15,000 school for Christian Scientists.

Sumter, S. C.—Depot.—Atlantic Coast Line Railway will build passenger depot to cost \$5000, after plans by Frank P. Milburn of Columbia, S. C. E. B. Pleasants, chief engineer of railway, Wilmington, N. C., can be addressed.

Tampa, Fla.—Warehouse.—Plant Investment Co. has awarded contract to Kendrick & Levie for erection of large brick warehouse to be used by the Tampa Hardware Co.

Thurmond, W. Va.—Depot.—It is reported that the Chesapeake & Ohio Railway will build a depot. C. W. Vandegrift is building superintendent at Alderson.

Timpson, Texas—School.—An election will be held to vote for building a \$10,000 school structure. Address "Town Clerk."

Troy, Ala.—Residence.—Arthur B. Foster has let contract to W. E. Hanchey for erection of \$4000 residence.

Washington, Ga.—Courthouse.—The construction of a courthouse is talked of. Address "County Clerk."

Weston, W. Va.—Hospital Buildings.—Z. T. Taylor of Parkersburg has contract at \$3500 to erect boiler and greenhouse buildings for Western Hospital.

RAILROAD CONSTRUCTION.

Railways.

Alley, Ga.—It is understood that the Central of Georgia Railway Co. has decided to extend its Bruton & Pineora branch from Nunez to Alley, and is now making surveys. John M. Egan at Savannah is president of the company.

Anniston, Ala.—The Dothan, Hartford & Florida Company is conferring with the business men of Anniston relative to including the city on the right of way. The road is being built from Dothan to St. Joseph, Fla.

Anniston, Ala.—President James W. Lapsley of the Anniston Industrial Association has appointed a committee to work in connection with the business men of Gadsden and Attalla to secure an extension of the Louisville & Nashville from Attalla through Blount county. R. Montfort at Louisville is chief engineer of the railroad company.

Beaumont, Texas.—It is stated that the International & Great Northern Railroad Co. has under consideration an extension from Spring to Beaumont, an estimated distance of seventy-five miles. Leroy Trice at Palestine, Texas, is vice-president.

Benton, Ark.—Corrigan & Co., contractors for the extension of the Choctaw & Memphis system, recently noted in the Manufacturers' Record, will sublet 500,000 yards of the grading. They may be addressed at Benton.

Charleston, W. Va.—The Charleston & Kanawha Valley Power & Railway Co. has been formed to build an electric system between Charleston, St. Albans, Montgomery and several other towns in West Virginia. It is capitalized at \$500,000. The promoters include Howard T. Goodwin of Philadelphia and T. J. Carmack of Charleston.

Chester, Va.—The Atlantic Coast Line has decided to build two miles of extension in Chesterfield county. Bids will be received for grading until August 20. Address E. T. D. Myers, superintendent at Richmond.

Clinton, Mo.—The report is confirmed that the St. Louis & San Francisco is surveying a line between Clinton and Crocker, a distance of eighty miles. C. D. Pardon at St. Louis is chief engineer.

Coleman, Texas.—The Vining & Coleman Railroad Co. has elected C. A. Hornbecker of Chicago, president, and John Andrewath of Austin, Texas, engineer. The company, it is reported, has decided to build from Coleman to coal mines in Coleman county, an estimated distance of twenty miles.

Danville, Ark.—It is announced that work is to begin at once upon the Danville & Southern Railroad to be constructed between Danville and Rover, Ark., a distance of fifteen miles. J. E. Wooten of Danville is president of the company.

Decatur, Ala.—Surveys are being completed on the Decatur, Danville & Southwestern Railroad, and it is expected to begin construction work in the near future. R. L. Stephenson at New Decatur is one of the promoters of the enterprise.

Donaldsonville, La.—The promoters of the electric railroad between Donaldsonville and the point on the Gulf of Mexico have secured a franchise to build a line through Lafourche parish. It is understood that work upon the road is to begin in the near future. Among those interested are C. P. Young of New Orleans and S. H. Lancaster of Thibodaux.

Eagle Lake, Texas.—The Cane Belt Railroad, in operation between Seely and Bay City, will probably be extended further in East Texas by the St. Louis syndicate which owns it. J. Lane of Houston is president, and W. T. Eldridge of Eagle Lake, general manager.

Eddyville, Ky.—It is reported that E. M. Barnes of Cleveland, Ohio, is interested in a scheme to complete a railroad system from St. Louis to Norfolk, Va., by way of Eddyville and Carrsville. Several links are to be constructed to connect existing lines.

Fitzgerald, Ga.—A contract for constructing fifteen miles of the extension of the Waycross Air Line has been awarded to Webb, Mobley & Co. of Fitzgerald. It is to be built immediately. G. D. Wadley at Waycross, Ga., is vice-president of the railroad company.

Fort Smith, Ark.—The Western Railroad Construction Co. has been formed to build from Fort Smith to Dallas, Texas. The road, with branches, it is estimated, will be 1000 miles in length. Among those reported as interested are H. E. Haven and M. E. Kelso of Enid, Okla., and P. W. Master of Kansas City.

Fredericksburg, Va.—Surveys are now in progress on the Fredericksburg & Rappahannock Railroad, and it is reported that contracts will be let as soon as the route is laid out. Among those interested is C. J. Rixey of Culpeper, Va.

Gainesville, Ga.—The latest report concerning the Gainesville & Dahonega Electric Railway is to the effect that all the arrangements to construct it have been completed, and that the company has purchased a site for water-power where the electric current will be generated. A. J. Warner, Dahonega, is president of the company.

Georgetown, S. C.—The Georgetown & Western Railroad, controlled by the Atlantic Coast Lumber Co., may be extended to Mt. Pleasant, a distance of forty-five miles. E. B. Freeman is manager of the company.

Hagerstown, Md.—The promoters of the railroad between Hagerstown and Boonsboro have secured a franchise to build their line through several towns on the route. Christian W. Lynch at Hagerstown is one of the promoters.

Hamburg, Tenn.—It is reported that a contract has been let to construct about eighteen miles of the Greenville, Nashville & Chattanooga Railroad between Hamburg and Corinth, Miss. F. L. Bates of Memphis, Tenn., is president of the company.

Joplin, Mo.—It is stated that the branch of the Missouri, Kansas & Texas Railroad, proposed between Joplin and the town of Mineral, Kan., is to be built at once, and that bids are being received. F. W. Pratt at Joplin is engineer.

Joplin, Mo.—Dwight W. Tuttle of New Haven, Conn., is interested in the Cherokee & Red River Valley Company, which, it is stated, has been formed to build from Joplin to Galena, Kans., and other points in the zinc and lead district. The estimated distance is twenty-seven miles.

Kansas City, Mo.—The Belt Line Railway Co. has purchased about fifty acres of land in the suburbs on which it is stated freight-yards will be built in the near future.

Lampasas, Texas.—It is announced that the Houston & Texas Central Railroad Co. has decided to build the proposed line between Burnet and Lampasas, a distance of sixty miles. This project has been under consideration for some time. G. A. Quinlan at Houston is general manager of the company.

Lancaster, S. C.—Leroy Springs, president of the Lancaster & Chester Railroad Co., advises the Manufacturers' Record that bonds are now being issued for the purpose of changing this line to standard gauge and to equip it with rolling stock. The road is twenty-nine miles in length, extending between the towns mentioned.

Marion, S. C.—Augustus Meller, president of the Carolina Northern Railroad Co., in a letter to the Manufacturers' Record writes that an extension to Georgetown is under consideration. Nothing will be done about it this year. Mr. Meller's address is Bourse Building, Philadelphia.

Mineral Wells, Texas.—Grading is in progress on the Weatherford, Mineral Wells & Northwestern Railroad, and it is expected to let contracts to complete the section between Mineral Wells and Graham at once. L. M. Fouts at Mineral Wells is president of the company.

Monroe, Ala.—The Monroe & Greenville Railroad Co. has been organized, with \$100,000 capital, by J. W. Block, G. L. Glover and others of Montgomery, Ala., to build a railroad in Monroe county.

Morganton, N. C.—It is reported that a survey has been made for an extension of the Ohio River & Charleston Railroad to Morganton from its present terminus, an estimated distance of sixty-five miles. A. N. Molesworth at Johnson City, Tenn., is engineer. It is stated that George L. Carter of Bristol, Tenn., has become interested in the line.

Nashville, Tenn.—The city of Nashville, the town of Clarksville and Cheatham county, Tennessee, have voted in favor of issuing bonds aggregating \$1,150,000 in aid of the extension of the Tennessee Central Railroad from Nashville to Clarksville. Jere Baxter at Nashville is president of the railroad company.

Pocahontas, Ark.—The Southern Missouri & Arkansas Railroad Co. has let a contract for the extension to Pocahontas to J. H. McCarthy of Little Rock, Ark. The estimated length of the extension is fifty-two miles. E. F. Blomeyer of Cape Girardeau, Mo., has been elected president of the company.

Sparta, Tenn.—The business men of Sparta are agitating an extension of the Tennessee Central Railroad from Cookeville to Sparta, an estimated distance of eighteen miles. Jere Baxter at Nashville is president of the company.

St. Louis, Mo.—The Terminal Association of St. Louis has decided to construct two lines of track in the suburbs of the city for passenger and freight traffic. J. S. Walsh at St. Louis is president of the company.

Talladega, Ala.—Surveys have been completed along the line of the Eastern of Alabama Railroad for a distance of twenty-five miles, and it is stated that bids will be received at once for construction. T. J. Baylor at Talladega is engineer.

Tyler, Texas.—The extensions to be built by the St. Louis Southwestern Railroad Co. in Texas aggregate 150 miles, and it is understood will be constructed as soon as possible. M. L. Lynch at Tyler is chief engineer.

Vernon, Texas.—Work upon the Blackwell, Enid & Southwestern Railroad has begun upon the Texas end, and four miles of track have already been laid. The line is to be built to Blackwell, in Oklahoma Territory, an estimated distance of 200 miles. E. F. Peckham of Blackwell is president of the company.

White Sulphur Springs, W. Va.—The Iron Mountain & Greenbrier Railroad Co. has been incorporated in West Virginia to build from White Sulphur Springs through portions of Greenbrier and Pocahontas counties. Among those interested are Thomas J. Shryock and C. C. Homer of Baltimore.

Wilmington, N. C.—A correspondent of the Manufacturers' Record writes that the purchasers of the railroad between Wilmington and Wrightsville have asked for a franchise from the Wilmington city authorities to lay a track within the city limits. The road, which is about twelve miles in length, is to be rebuilt as a trolley line. Hugh MacRae at Wilmington is one of the owners.

Street Railways.

Augusta, Ga.—The Augusta Railway & Electric Co., it is stated, has decided to build several miles of track to be used for freight purposes in the suburbs. About ten miles of additional trolley line may also be constructed. D. B. Dyer may be addressed.

Durham, N. C.—The Durham Electric Railway Co., it is stated, will build about eight miles of trolley line on the proposed extensions. The president may be addressed.

Memphis, Tenn.—The extension of the Memphis Street Railway will be about one mile in length. No contracts will be let.

Natchez, Miss.—It is announced that work is about to begin on the proposed street railway. E. H. Ratcliff is president of the promoting company.

Yazoo City, Miss.—W. D. Pugh and others have become interested in a plan to build an electric street railway in the city and suburbs, in connection with an electric-light plant.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Architects.—A. A. Northen, Ashland, Ala., wants to correspond regarding obtaining plans for business houses.

Athletic Goods.—Harry Morton, Hornbeck, La., wants to buy roller skates, dumb bells and quoits.

Boat.—C. Harrison Parker, president board of control, Baton Rouge, La., will open bids September 1 for 60 to 100-ton stern-wheel steamboat to draw not over thirty inches loaded.

Boiler and Engine.—Virginia Woolen Co., Winchester, Va., is in the market for boiler and engine.

Boiler and Engine.—S. A. Douglas, Glen Mary, Tenn., is in market for 12 to 15-horse-power boiler and engine on wheels.

Bone Mill.—W. A. Love, Unionville, N. C., is in the market for a second-hand bone mill for farm use.

Bottling Works.—See "Ice Plant."

Brick Machinery.—L. J. Johnson, New Hill, N. C., wants addresses of makers of brick machinery.

Broom Machinery.—Box 176, Fayetteville, N. C., wants to correspond with dealers in broom machinery and supplies.

Building Materials.—A. A. Northen, Ashland, Ala., wants to receive catalogues and prices on building materials and supplies, fixtures, etc.

Building Supplies.—J. W. Miner, Ronda, N. C., wants quotations on window and bevel plate mirror glass.

Canning Apparatus.—E. A. Sterling, Como, Texas, wants addresses of manufacturers of canning machinery.

Cocoon-products Machinery.—See "Oil Mill."

Compressed-air Plant.—Payne & Joubert, New Orleans, La., wants prices on compressed-air riveters (two), two drills and a caulker; also on steam air compressor to operate said tools.

Construction.—Sealed proposals will be received at office of lighthouse engineer, Mobile, Ala., until September 9 for construction and erection of one lighted beacon in Key West harbor and removal of two lighted beacons in Choctawhatchee bay, Florida, in accordance with specifications, copies of which, with blank proposals and other information, may be had upon application to Lieut.-Col. A. N. Damrell, corps of engineers, United States Army.

Conveying Machinery.—J. K. Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids September 10 for installation of ash-handling apparatus in United States postoffice, etc., at St. Louis. Copies of plans, etc., may be obtained from architect, or from custodian of building at St. Louis.

Cotton Mill.—L. B. Whatley, 118 High street, Portsmouth, Va., wants prices on cotton-battling machinery.

Crate Supplies.—Panther Creek Co., Panther Creek, N. C., wants to buy fillers for egg crates; wire preferred.

Crusher.—Cobb Malloy Crushed Stone Co., care Bank of Columbia, Columbia, S. C., is in the market for rock crusher of 300 tons capacity in ten hours without boiler and engine, but wants boiler and engine capacity stated; also wants three steam drills.

Crusher (for bones).—See "Bone Mill."

Dredging.—Sealed proposals for dredging in harbor of Savannah, Ga., will be received at United States engineer office until September 16; information furnished on application; C. E. Gillette, captain engineers.

Drills.—See "Crusher."

Electric-light Plant.—R. J. Fenn, Lumberton, Miss., wants prices on electric plant of 600 incandescent and twenty are lights.

Electric-light Plant.—Town of Winnsboro, S. C., contemplates installing plant of about thirty are and 1000 incandescent lamps. Address Thos. H. Ketchin, Intendant.

Electric-light Plant.—C. J. Allen, lieutenant-colonel, engineers, 2001 I street N. W., Washington, D. C., will open bids September 19 for furnishing and installing electric-light plant at Fort Washington, Md.

Elevators.—Ware Furniture Manufacturing Co., 2 Fourth street, Atlanta, Ga., will buy elevators for factory.

Engine.—Electric Construction Co. of Virginia, Richmond, Va., is in the market for a second-hand two-and-one-half-horse-power gasoline engine for small dynamo.

Exhaust Fan.—Hobson & Craig Bros., Morristown, Tenn., want to buy an exhaust fan, second-hand.

Fire Protection.—Ware Furniture Manufacturing Co., 2 Fourth street, Atlanta, Ga., will buy sprinkler system.

Games.—See "Athletic Goods."

Glass.—See "Building Supplies."

Grinding Machinery.—See "Ochre Machinery."

Heating Plant.—J. K. Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids September 5 for installation of heating plant for surgeons' quarters at Reedy Island, Del. Copies of plans, etc., on application.

Ice-cream Freezer.—Harry Morton, Hornbeck, La., wants ice-cream freezer.

Ice Plant.—Mayfield (Ky.) Ice & Coal Co. wants prices on ice plant.

Ice Plant.—Electric Light & Water-Works Co., Ladonia, Texas, wants bids on machinery for ice plant, twenty tons or over.

Ice Plant.—Talladega Ice Works, W. C. Brewer, secretary, Talladega, Ala., wants prices on new and second-hand machinery for ice plant and bottling works.

Incubators, etc.—Panther Creek Co., Panther Creek, N. C., wants catalogues and prices of incubators and brooders.

Ironworking Machinery.—Petersburg (Va.) Iron Works Co., wants second-hand medium-sized planer and shaper; send description, with prices.

Knitting Machinery.—C. H. Thompson,

Fort White, Fla., wants to correspond with makers of hosiery-knitting machines.

Knitting Machines.—Lake City (Fla.) Board of Trade, M. M. Scarborough, secretary, wants to correspond with manufacturers of latest improved hosiery-knitting machines.

Laundry Equipment.—J. M. Simmons, Montezuma, Ga., wants addresses of makers of steam-laundry outfits complete.

Levee Construction.—Board of State Engineers, Cotton Exchange Building, New Orleans, La., will open bids August 20 for constructing Bayou Goubray levee. Cash deposit of \$130 must accompany each bid, and bond of \$1250 with two solvent securities is required. Usual rights reserved.

Machine Tools.—See "Ironworking Machinery."

Mining Machinery.—See "Ochre Machinery."

Nail Machinery.—E. J. Codd Co., 700 South Caroline street, Baltimore, Md., wants addresses of makers of tree-nail machinery.

Ochre Machinery.—Peyton H. Moore, Blount Springs, Ala., wants machinery for washing, grinding and otherwise preparing ochre for market.

Oil Mill.—C. J. Allen, care Oriental American Co., Portland, Ore., wants to correspond with makers of machinery for working up copra into coconut oil and other products.

Organ Manufacturers and Dealers.—W. R. Norton, Redstar, Miss., wants addresses of organ manufacturers and dealers.

Overalls Machinery.—Thos. L. Goff, Spartanburg, S. C., wants full information concerning manufacture of work shirts, drawers, overalls, etc.

Paint.—L. J. Johnson, New Hill, N. C., wants addresses of dealers in paint in crude form.

Piping.—See "Sewers."

Piping.—Joseph Hull, 104 Bay street, E., Savannah, Ga., wants 500 to 600 feet of eight-inch standard pipe, also about 200 feet of good 10-inch standard pipe, good condition, second-hand.

Pumping Plant.—See "Water Supply."

Pumps.—Cameron & Barkley Company, Charleston, S. C., is in the market for two 1000 or 1250-gallon underwriters' pumps.

Quarrying Machinery.—See "Crusher."

Quarrying Machinery.—B. S. Bowman, Millersburg, Pa., wants addresses of makers of diamond circular saws for stone; also of machinery for polishing them.

Railway Equipment.—C. H. Bull & Co., Norfolk, Va., are in the market for two or three miles of second-hand steel rail, twenty-five or thirty pounds.

Roofing.—Louisburg Oil Mills, Louisburg, N. C., is in the market for several hundred squares of five-ply gravel roofing.

Salt Machinery.—E. A. Sterling, Como, Texas, wants addresses of manufacturers of salt machinery.

Saw-mill.—Alabama Lumber Co., Huntsville, Ala., will purchase circular-saw mill, capacity 10,000 to 20,000 feet per day.

Saw-mill.—S. A. Douglas, Glen Mary, Tenn., is in market for short-log saw-mill and edger.

Saws.—See "Woodworking Machinery."

Sewers.—D. C. Parrish, chairman of committee, Paris, Ky., will open bids September 2 for construction of about three miles of sewers. Benj. Thompson of Chattanooga, Tenn., is engineer.

Sewing Machines.—See "Overalls Machinery."

Stone-sawing.—See "Quarrying Machinery."

Water Supply.—H. E. Butcher, manager Springfield (Tenn.) Electric Co., wants suggestions for raising water from deep well and prices on the machinery needed.

Well-drilling Machinery.—W. S. Duckworth, Chamber of Commerce, Nashville, Tenn., may possibly want machinery and tools for well-drilling in the future.

Well-drilling.—International Development Co., Lincoln Trust Building, St. Louis, Mo., wants estimates on sinking ten wells in Texas.

Woodworking Machinery.—Loomis & Nyman, Tiffin, Ohio, want a second-hand 30-inch double surfacer.

Well-drilling Machinery.—Lafayette Oil & Gas Co., J. W. Layne, secretary, Higginsville, Mo., will soon be in the market for deep-well machinery for prospecting.

Woodworking Machinery.—See "Saw-mill."

Woodworking Machinery.—J. W. Thorn, Radford, Va., is in the market for stove mill.

Woodworking Machinery.—T. S. Singleton, Waycross, Ga., will soon want to buy planing-mill machinery.

Woodworking Machinery.—A. A. Towers, Marietta, Ga., wants addresses of manufacturers of machinery for making insulator pins and brackets.

Woodworking Machinery.—Hobson & Craig Bros., Morristown, Tenn., will be in the market for six or eight rip saws for shuttle blocks, two cut-off saws and machine for insulator pins.

TRADE NOTES.

The Nineteenth Order.—The Burt Manufacturing Co. of Akron, Ohio, has recently shipped its nineteenth order of Cross Oil Filters to the American Tinplate Co.

Good Thing for Schools.—The Peck-Hammond Co., Cincinnati, Ohio, is now placing its heating, ventilating and sanitary flushing closets in four school buildings at Newport News, Va.

Running Night and Day.—This is the state of affairs with the New Process Rawhide Co., Syracuse, N. Y. It is obliged to work overtime in order to fill an order for Bevel Gear Wheels from a New England customer.

New Idea in Fans.—The Exeter Machine Works, Exeter, N. H., has just built a steam fan from a new design, doing away entirely with the additional foundation for engine. The whole is self-contained, and can be immediately bolted down and started up, making a great saving in foundation.

An Important Contract.—The Electric Construction Co. of Virginia has been fortunate in securing a contract in connection with the city lighting plant at Gordonsville, Va. The company, which is located at Richmond, Va., makes a specialty of electrical apparatus and supplies, also repairs electrical machinery.

An Attractive Display.—There has been a very large block of space rented in the Philadelphia Bourse, Exhibition Department, for the display of entirely new line of textile machinery which has never been placed on exhibition anywhere before. It will be one of the most attractive displays ever made of this equipment.

A Very Successful Year.—This is the report of the Royersford Foundry & Machine Co. of Royersford, Pa., whose plant is running on full time. It is having a very large sale of its punch and shearing machinery, and future prospects are excellent. Recent orders have been received from New York, Cleveland, Ohio, Milton and Eldred, Pa.

Sale of a Mill Plant.—A recent sale made by Messrs. Brobston, Fendig & Co., the well-known real-estate operators of Brunswick, Ga., was of a mill plant at Bladen, Ga., to Messrs. James Clarke and others of Morristown, N. J. This firm has a variety of property for manufacturing and other purposes which it is in a position to offer at very reasonable terms.

A Large Contract.—The Means & Fulton Iron Works of Birmingham, Ala., has secured a contract representing \$90,000 in work to be done for the Republic Iron & Steel Co. at Thomas, Ala. It includes a stockhouse, which will be 600 feet long and 90 feet wide, also ore and limestone bins. The contract includes all iron and steel work, overhead tracks, chutes and other fittings.

Beginning to Export.—While the Littleford Bros. of Cincinnati, Ohio, have so much domestic trade that they are several months behind in their work, they are also beginning to fill export orders, having recently shipped several carloads of machinery for soap manufacturing to Mexico. Their specialties in sheet steel and iron work and perforated metals are well known to the trade.

A New Factory.—The American Spiral Pipe Works of Chicago, Ill., which recently suffered damage by fire, has not been prevented from turning out this product, and states that it is manufacturing more pipe than ever. It is constructing a very large factory, which it hopes to occupy within the next sixty days. Here it will have excellent facilities for shipment and a full equipment of the most modern machinery.

Not Worrying Over Hard Times.—The Soule Steam Feed Works of Meridian, Miss., is not evidently worrying over hard times, judging by recent orders received. They include a large contract to be filled for the Alger Sullivan Lumber Co. of Century, Fla.; one for the Carney Lumber Co. of Carney, Ala.; also orders for equipment from High Point, Ala., Morristown, Ga., Nocatee, Fla., Savannah, Ga., Hattiesburg, Miss., Bellville and Dardaville, Ark.

Carried Seventeen Carloads.—The annual picnic of the employees of F. E. Myers & Bro.

of Ashland, Ohio, resulted in seventeen carloads of people being carried to the celebration. The affair was enjoyed by nearly all of the small army of men on the pay-roll of this firm and their families. The Myers Bros. made every effort to add to the pleasure of the occasion, and purchased 1500 tickets for steamboat excursions, which they presented to the employees.

Favored With Orders.—The Williams Patent Crusher & Pulverizer Co. of St. Louis, in a recent letter writes that it is literally "full of orders" for all kinds of crushers and pulverizers, to be shipped both to this country and Europe. It has also received a number of orders for its pneumatic pulleys and friction clutch pulleys. Many of the largest manufacturers in the country have been customers of the Williams Company for a period of years, and are among its references.

Wide Trade Territory.—Among recent orders for baling presses secured by the Boomer & Boschert Press Co., Syracuse, N. Y., are those from Enterprise Mills, Enterprise, Ala.; Woodstock Cotton Mills, Anniston, Ala.; Palmetto Mills, Palmetto, Ga.; Woodruff Cotton Mills, Woodruff, S. C.; Gonzales Cotton Mills, Gonzales, Texas; Marysville Woolen Mills, Marysville, Cal.; Anderson Cotton Mills, Monticello, Ark.; Burk Bros., Calcutta, India; P. W. Moncada, Mexico; Queen City Cotton Mills, Burlington, Vt.

No Excuse for Dirt.—With the opportunity to obtain Lythite Cold Water Paint there is no excuse for dirt and unsightly factory buildings. Such is the opinion of the writer of a testimonial in favor of this compound. Notwithstanding its very high quality, it is sold at a price which allows its general use, and scores of manufacturers are now buying it in large quantities. All readers of the Manufacturers' Record interested in the subject are invited to write to the Frank S. De Ronde Co., 46 Cliff street, New York, for information relative to it.

No Dull Times Here.—The firm of Edward J. Etting of Philadelphia and New York is not complaining of dull times. Recent orders which it has received are for outfits for foundries from Scranton, Pa., Carbondale, Pa., as well as Cuba, Manchuria and Mexico. It has also sold a large number of cupolas, molding machines and cranes to such customers as the General Electric Co. of New York, the New York Central Railroad Co., the Parkburgh Company of York, Pa., the Baltimore & Ohio Railroad Co. and the Norfolk & Western Railway Co.

Extending Its Field.—An idea of the wide trade territory enjoyed by the Wilmarth & Morman Company, Grand Rapids, Mich., can be gained when it is stated that the New Yankee drill holder made by this company has been adopted for use in the shops of the American Watch Tool Co. of Waltham, Mass. It will be used with the combination cutter grinder manufactured by the American Company. The Yankee holder has a high reputation among machinists for its durability and effective work, and the maker is meeting with a deserved patronage.

Throughout the South.—The S. B. Alexander, Jr., Co. of Charlotte, N. C., has evidently secured an enviable Southern trade for its specialties in electrical machinery, engines, boilers and other equipment, as is evidenced by orders recently received. They include plants for mills and other purposes in Wadesboro, N. C., West, Texas, Williamston, S. C., Lenoir, Belmont, Wake Forest and Clayton, N. C., Chester, S. C., Lexington, Charlotte and Thomasville, N. C., Kosciusko, Miss., Durham, Rydsville and Rocky Mount, N. C. The plans include complete lighting systems, many of which are very extensive.

Water at a Low Cost.—Southern people can thank a Southern company for a system of boring artesian wells successfully and cheaply. The Hughes Specialty Well Drilling Co. of Charleston, S. C., has bored thirty of these wells within the last eighteen months in South Carolina alone. While some of the wells are used to secure water for drinking purposes, an opportunity has also been afforded to irrigate thousands of acres of land especially adapted for rice and truck growing. Irrigation thus obtained has attracted much attention from farmers in other portions of the South. The company referred to is prepared to drill wells ranging from three to twenty-four inches in diameter and from 60 to 2000 feet deep.

Gravity Filtration.—The East Albany Water-Works Co. at Rensselaer, N. Y., has had a filtering plant constructed in connection with its service. Reports have been made of the efficiency of the plant by such well-known experts as Prof. Wm. P. Mason and James M. Cald. As the result of a test of six days it was shown that the water

treated by the filter was clean; that all color and turbidity had been removed, and that it had practically fulfilled all requirements. Before passing through the filter it contained a large quantity of impurity in various forms. The plant is what is known as the Gravity Filter Plant, and was installed by the New York Continental Jewel Filtration Co., Mills Building, New York.

Sheet-Steel Tubing.—This is one of the specialties of the Mackie Steel Tube Manufacturing Co. of Hammond, Ind., which has been very successful since it began manufacturing brazed tubing two years ago. Since beginning this industry it has been compelled to remove from Chicago to Hammond to secure a plant especially adapted to turning out this product. At present the company is manufacturing over twenty-five tons of sheet steel daily into tubing ranging from one-quarter to an inch and two inches in diameter. Among the varieties are brazed and butted tubing suitable for umbrellas, bedsteads, stoves and implements. Already the company is considering the enlargement of its plant on account of an increase in its orders.

Success that Encourages.—The Burnham Grate Co. of Huntsville, Ala., has just closed the first eleven months in business, and has met with the most encouraging success in the sale and introduction of its Duplex Grates into all the Southern and Western States, and into many of the Eastern, Northern and Northwestern. In order to accomplish this the grate has been subjected to many severe tests, and proven worthy the many high recommendations heretofore received. There is no longer the slightest question but this grate will effectually and comfortably warm two rooms on one floor with the trouble and cost of but one fire. It has been found of great benefit and economy in mill and factory cottages for employees.

Many Orders.—The Sprague Electric Co., 527-531 West Thirty-fourth street, New York, is receiving many orders for its apparatus from all parts of the country and abroad. Among a few recent orders are the following: Bailey, Walker & Co., Buenos Ayres, South America; Steelton Light, Heat & Power Co., Steelton, Pa.; Fort Wadsworth, Staten Island; Fort Hancock, N. J.; American Linseed Co., Staten Island; Gouder & Paschke Manufacturing Co., Milwaukee; Roe & Conover, Newark, N. J.; Fred Miller Brewing Co., Milwaukee; Plymouth Mills, Plymouth, Mass.; a quantity of motors for the mines and refining plant of the Arlington Copper Co., Arlington, N. J.; 100-horse-power motor, American Locomotive Co., Cooke Works, Paterson, N. J.

To Be Used at the Exposition.—Following the exposition at Buffalo, one of the most interesting displays of this character will be held at Karlsruhe next year. Already American manufacturers appreciate the importance of this exposition, and it is interesting to note that the Standard Paint Co. of 100 William street, New York, has secured a contract to furnish its well-known Ruberoid roofing for various buildings. The contract embraces a very large quantity of this material, and is a testimonial to its value. The Standard Company seems to be covering many portions of the world with Ruberoid, as it is being sent to Russia, is sheltering Arctic explorers, and is covering barracks used by the military forces in China. It can also be found in Africa, and even in far-away Australia.

Washington Monument Elevator.—One of the most interesting electric power plants in this country is the one by which the elevator service in the Washington monument is operated. It was installed by the Marine Engine & Machine Co. of 80 Broadway, New York, and was planned especially for the extraordinary work required. As it is necessary to lift the car to a height of over 500 feet, every portion of the equipment was designed especially for the undertaking. The car now in use weighs 5570 pounds without passengers, but such is the saving in power by the use of electric machinery that the elevator can be operated with the same load at twice the speed of the former car, making the trip in five minutes. Yet no more horse-power is required. Exhaustive tests have been made of the elevator since its completion by the government engineers, with entirely satisfactory results.

An Important Invention.—A machine which may produce a very important change in textile manufacturing, especially in the South, has recently been placed on the market by the Philadelphia Textile Specialty Machine Co. It is a mercerizing machine, which, it is claimed, can be utilized in connection with ordinary cotton yarns at a very small cost. Hitherto high-grade yarns made

of Egyptian and Sea Island cotton have been mercerized almost exclusively, and the ordinary grades neglected, owing, it is stated, to the cost of treatment. By the use of the machine referred to an opportunity is given the manufacturer of the coarser yarns to secure the benefit of this treatment, thus enabling him to command a much better price in the market. Already the machines have attracted much favorable comment from those who have used them. It will mercerize 100 pounds of skein yarn in ten hours, and occupies but fifteen square feet of floor space. Among recent customers for it are the American Chemical & Textile Coloring Co. of Wilmington, N. C., and G. S. Lings & Co. of New York.

Over 8000 Sold.—Over forty years ago B. F. Sturtevant of Boston, Mass., established the first blower manufactory in the United States. Within ten years thereafter the necessity for equipping large fans with independent means of driving led to the designing and building of a line of distinctively fan engines. A little over ten years ago the rapid increase in the use of electricity as a motive power opened the way for the electric fan with motor and fan built one for the other. The opportunity was recognized, and the B. F. Sturtevant Co. (successors to Mr. Sturtevant) immediately established an electrical department, designed a full line of fan motors and thus gave the purchaser an opportunity to choose between an engine-driven and a motor-driven fan. Today it has patterns for over 100 sizes and types of engines, ranging from two to 250 horse-power, and a record of over 8000 engines sold since it first entered this field. In its various motor designs it is likewise equipped with an equal variety. A corresponding line of generators is also built by utilizing the essential parts of these motors. Both engines and motors have been developed under the exacting conditions usually incident to fan practice, namely, high speed and constant operation with comparatively little attention.

A Healthy Growth.—Owing to the great increase in its business, the Ridgway Dynamo & Engine Co., Ridgway, Pa., decided on May 1 to increase its capital stock to enable it to enlarge its works. As a result of this it is now erecting additional buildings, which will be nearly double the dimensions of the old. The whole plant, when finished, will cover about two and one-half acres of land. All will be equipped with the most modern machinery and tools, and the capacity of the works will be considerably more than double what they are now. The new buildings will be constructed of steel, with brick walls, and include large additions to both the machine shop and the foundry, together with new boiler-house complete. The latter will be furnished with elevators and storage bins for the keeping of large quantities of coal. The new machinery includes five electric cranes, three in the machine shop and two in the foundry, a new power plant complete, which embraces 500 horse-power of water-tube boilers, with brick stack, one engine and generator of 300 kilowatts, and a second engine and generator of 100 kilowatts. The tool equipment includes a variety of lathes, boring mills and milling machines of ordinary types, a specially-designed boring mill for cylinders and engine beds, and specially-constructed milling machines for various operations on engines and generators.

TRADE LITERATURE.

Small, but Needful.—The catalogue recently published by the Milton Manufacturing Co. of Milton, Pa., illustrates and describes the cold-punched nuts, also the hot-pressed nuts, wrought iron plate washers and other specialties which it offers the trade. The catalogue contains a complete list of various sizes and prices, and is of general interest to machinists.

Interesting and Valuable.—The remarkably large number of uses to which the "E" volume blowers built by the Buffalo Forge Co. of Buffalo, N. Y., are adapted are described in a pamphlet recently issued. It is unusually well illustrated, and contains much valuable as well as interesting information. It will be sent to any inquirer on application to the company.

A Pulley That Is Popular.—The All-Wrought-Steel Split Pulley placed on the market by the Niles Tool Works Co., 136-138 Liberty street, New York, is deservedly popular with millmen, who recognize its many advantages. In a recent catalogue the various sizes and prices of the pulleys are given, with an adequate description. Some of the features of the American pulleys, as they are termed, are no shrinkage, no fire risk, and bushings to fit all sizes of shafting.

SOUTHERN RAILWAY COMPANY.

SEVENTH ANNUAL REPORT.

New York, August 15, 1901.

To the Stockholders of the Southern Railway Company:

The President and Board of Directors submit the following report of the operations of the Company for the year ended June 30, 1901:

INCOME ACCOUNT.

	1901.	1900.	Increase.
Gross earnings from operation.....	\$34,660,482 18	\$31,200,869 89	\$3,459,612 29
Operating expenses and taxes.....	24,343,625 09	21,831,446 86	2,512,178 23
Net income from operations.....	\$10,316,857 09	\$9,369,423 03	\$947,434 06
Income from other sources.....	488,705 91	318,805 48	179,900 43
	\$10,815,563 00	\$9,688,228 51	\$1,127,334 49
Interest and rentals.....	\$7,181,295 96	\$6,755,442 30	\$425,853 56
Other deductions from income.....	93,767 10	15,534 71	78,232 39
	\$7,275,062 96	\$6,770,977 01	\$504,085 95
Balance.....	\$3,540,500 04	\$2,917,251 50	\$623,248 54
Dividends on preferred stock:			
April, 1901, 2 per cent.; 1900, 1½ per cent.....	1,200,000 00	900,000 00	300,000 00
	\$2,340,500 04	\$2,017,251 50	\$323,248 54
Reserved for October dividends:			
1901, 2 per cent.; 1900, 1½ per cent.....	1,200,000 00	900,000 00	300,000 00
Balance carried to credit of profit and loss.....	\$1,140,500 04	\$1,117,251 50	\$23,248 54

This account for 1901 includes the results of operation of the St. Louis Division for six months ended June 30, 1901, and those of the extension of the Carolina Midland Railway from Allendale, S. C., to Hardeeville, S. C., from December 10, 1900, to June 30, 1901. For the year 1901 those of the Augusta Southern Railroad are included only from July 1, 1900, to April 25, 1901.

For details of Income Account see Tables 2 and 3, pages 42 and 43 of this report.

For Comparative Statements of Earnings and Expenses of substantially the same properties for the two years see Tables 12 and 13, pages 53 and 54.

Mileage Operated:

The average number of miles operated for the year, including the St. Louis Division, was 6612.11, as compared with an average of 6306.12 miles in 1900.

The mileage operated at the close of the year was 6728.85 miles, as against 6431.11 at the close of the previous year, an increase of 297.74 miles, as follows:

St. Louis Division (formerly Louisville, Evansville & St. Louis Consolidated Railroad).....	574.34 miles.
Extension—Round Hill, Va., to Bluemont, Va.....	4.03 "
Ore Belt Railroad, at Cave Springs, Ga.....	5.23 "
Belle Ellen Branch.....	3.05 "
Carolina Midland Railway—Extension Allendale, S. C., to Hardeeville, S. C.....	61.50 "
Trackage over Central of Georgia Railway—Central Junction to West Broad street, Savannah, Ga.....	3.37 "
Trackage over Plant System, Brunswick, Ga.....	2.94 "
Sundry small additions.....	1.41 "
	445.87 "

Less mileage no longer operated by Southern Railway:

Augusta Southern Railroad (lease annulled April 25, 1901).....	82.93 miles.
Trackage over Charleston & Western Carolina Railway.....	34.70 "
Trackage over Plant System.....	30.50 "
	148.13 "

Total increase.....

Increase in Interest and Rentals:

The net increase of \$25,853.56 in "Interest and Rentals" consists of:

Increase in interest upon Southern Railway First Consolidated Bonds.....	\$231,385 00
Interest January 1, 1901, to June 30, 1901, upon \$10,750,000 Southern Railway Company, St. Louis Division, First Mortgage Four Per Cent. Bonds.....	215,000 00
Interest March 1, 1901, to June 30, 1901, upon \$7,824,000 Southern Railway Company Mobile & Ohio Collateral Four Per Cent. Bonds.....	104,320 00
Interest on Southern Railway Company Certificates of Indebtedness issued September 15, 1900, to provide for construction of Ensley Southern Railway, and on Southern Railway Company Certificates of Indebtedness issued May 1, 1901.....	27,000 00
Increase in interest on \$1,000,000 Southern Railway Company Certificates of Indebtedness issued to provide for extension of the Carolina Midland Railway; paid for the entire fiscal year as against fifteen days of the previous year.....	38,444 45
Increase in rental of the Mobile & Birmingham Railroad; 2 per cent. dividend paid on preferred stock for year 1901, as against 1 per cent. for the previous year.....	9,000 00
Increase in interest on Virginia Midland Railway Serial Mortgage D Bonds, due to increase from 4 per cent. to 5 per cent., from March 1, 1901.....	3,166 67
Increase in dividend on Atlanta & Charlotte Air Line stock from 6 per cent. to 7 per cent. from March 1, 1901, in accordance with the terms of the operating contract.....	5,066 66
Interest from November 1, 1900, on \$3,000,000 Southern Railway Car Trust, Series A, at 4 per cent. per annum, less adjustment of interest on advances prior to November 1, 1900.....	69,522 82
Interest from January 1, 1901, on \$50,000 Venice & Carondelet Railroad First Mortgage Six Per Cent. Bonds.....	1,500 00
Increase in rental of the Atlantic & Danville Railway, paid for entire year, as against ten months of the previous year.....	21,166 66
Increase in rental for trackage rights over Charleston & Savannah Railway, paid six months and twenty-one days in previous year, as against full year 1900-1901, less reduction in trackage by reason of extension of the Carolina Midland Railway; rental for trackage rights over Central of Georgia Railway at Savannah, Ga., from December 1, 1900.....	1,709 83
Sundry small increases.....	583 31
	291 67
Total increases.....	\$729,757 04

Decrease in interest on Certificates of Indebtedness issued in December, 1897, for account of purchase of Memphis Division, the last certificate having been paid December 1, 1900..... \$23,000 00 |

Decrease in interest on Certificates of Indebtedness issued in May, 1899, to provide in part for purchase of South Carolina & Georgia Railroad stock, and Northern Alabama Railway bonds and stock, \$300,000 of these certificates having been paid during the year..... 18,333 32 |

Decrease in interest on Certificates of Indebtedness issued in May, 1899, to provide in part for purchase of bonds and stock of Carolina Midland Railway and stock of Sevier & Knoxville Railroad, last certificate paid November 15, 1900..... 11,034 71 |

Decrease in rental of South Carolina & Georgia Railroad on account of annulment of lease of Augusta Southern Railroad on April 25, 1901..... 3,194 44 |

Decrease in interest on Atlanta & Charlotte Air Line Income Mortgage Four Per Cent. Bonds Extended, paid at the rate of 6 per cent. for nine months and 4 per cent. for three months of year preceding, as against 4 per cent. for entire fiscal year 1901..... 11,250 00 |

Decrease in interest on Charlotte, Columbia & Augusta Railroad First Extended Mortgage Five Per Cent. Bonds, due to retirement of \$357,000 of said bonds exchanged for Southern Railway Consolidated Five Per Cent. Bonds, as provided in Consolidated Mortgage..... 8,925 00 |

Decrease due to maturity and payment of \$3,123,000 East Tennessee, Virginia & Georgia Railroad First Mortgage Seven Per Cent. bonds on July 1, 1900..... 218,610 00 |

Decrease due to discontinuance of Charleston & Western Carolina Railway trackage December 9, 1900..... 1,496 00 |

Miscellaneous decreases, due to retirement of Richmond & Danville and Georgia Pacific Equipment Sinking Fund bonds..... 8,060 01 |

Total decreases.....

Net increase..... \$425,853 56 |

The increase of \$231,385 in interest upon Southern Railway First Consolidated Bonds was due:

- To the fact that \$1,206,000 of bonds, sold in June, 1900, which bore interest for only eighteen days of the fiscal year 1900, carried interest for entire year 1901, involving an increase of.....
- To interest from July 1, 1900, on \$3,123,000 of bonds, sold to retire a like amount of East Tennessee, Virginia & Georgia Railroad First Mortgage Seven Per Cent. Bonds maturing on that date.....
- To interest from January 1, 1901, on \$357,000 of bonds exchanged for a like amount of Charlotte, Columbia & Augusta Railroad First Extended Mortgage Five Per Cent. Bonds, in accordance with provision of Consolidated Mortgage.....

\$231,385 00

PROFIT AND LOSS ACCOUNT.

The balance standing at credit of Profit and Loss on June 30, 1900, was.....\$3,510,701 86
The balance standing at the credit of that account on June 30, 1901, was.....4,637,253 71
For details of Profit and Loss Account see Table 4, page 44.

FINANCIAL CONDITION.

The financial condition of the Company at the close of the year is shown in the comparative balance sheet (Table 1, pages 40 and 41).

The Company has no floating debt, and has had none since its organization.

The liabilities of every character of all subordinate companies operated as a part of the system, whether leased or owned, affecting the income of the Southern Railway Company, are shown in the balance sheet, and are treated as liabilities of this Company.

Capital Stock:

There have been no changes during the year in the amount of Capital Stock outstanding.

Mobile & Ohio Stock Trust Certificates:

These Stock Trust Certificates (\$1,826,900) were issued in exchange for a like amount of the Capital Stock of the Mobile & Ohio Railroad Company deposited with the Guaranty Trust Company of New York, Trustee.

Funded Debt, Outstanding Securities of Leasehold Estates and Equipment Obligations:

As stated in the last annual report, there were outstanding on June 30, 1900:

Funded Debt (including \$1,276,000 Southern Railway Consolidated Bonds free in Treasury and \$1,500,000 Memphis Division Second Mortgage Bonds owned by the Company).....	\$104,970,200 00
Outstanding Securities of Leasehold Estates.....	25,952,200 00
Equipment Notes of old Companies or their Receivers.....	133,889 97
Miscellaneous Equipment Obligations of Southern Railway Company.....	1,675,996 29

Total..... \$132,732,286 26 |

On June 30, 1901, as shown by the balance sheet (Table 1), there were outstanding:

Funded Debt (including \$2,538,000 Southern Railway First Consolidated Bonds free in Treasury and \$1,500,000 Memphis Division Second Mortgage Bonds owned by the Company).....	\$124,581,700 00
Outstanding Securities of Leasehold Estates.....	25,552,200 00
Equipment Notes of old Companies or their Receivers.....	134,873 08
Miscellaneous Equipment Obligations of Southern Railway Company.....	1,227,996 61
Southern Railway Car Trust, Series A.....	2,775,000 00

Total..... \$154,271,769 69 |

Net increase during the year in these accounts..... \$21,539,483 43 |

This net increase of \$21,539,483.43 represents:

Additions During Year:

(a) New Bond Issues:
Southern Railway Company First Consolidated Bonds..... \$4,742,000 00 |

Issued as follows:

Upon retirement of an equal amount of Equipment Bonds and Equipment Trust Obligations of the old Companies and of their Receivers.....	\$246,000 00
Upon retirement of an equal amount of Prior Lien Bonds redeemed, viz.: Charlotteville & Rapidan Railroad First Mortgage Bonds.....	16,000 00
Issued during the year for account of the acquisition of new property, but not sold.....	1,600,000 00
Upon retirement of an equal amount of Charlotte, Columbia & Augusta Railroad First Extended Mortgage 5 Per Cent. Bonds.....	357,000 00
Issued for the purpose of paying East Tennessee, Virginia & Georgia Railroad First Mortgage Seven Per Cent. Bonds matured and paid July 1, 1900.....	3,123,000 00
	\$4,742,000 00

Southern Railway Company—St. Louis Division First Mortgage Four Per Cent. Bonds issued for the purchase of the Louisville, Evansville & St. Louis Consolidated Railroad, now the St. Louis Division..... 10,750,000 00 |

Southern Railway Company—Mobile & Ohio Collateral Four Per Cent. Gold Bonds issued to acquire an equal amount of Mobile & Ohio Railroad Company General Mortgage Four Per Cent. Bonds..... 7,824,000 00 |

(b) Equipment Notes of Old Companies:
Equipment Notes of Receiver of Louisville, Evansville & St. Louis Consolidated Railroad, assumed with the purchase of that property..... 106,192 69 |

(c) Miscellaneous Equipment Obligations:
Issued for new equipment during the year, payable in monthly installments during the years 1901 to 1908, or earlier, at the option of the Company..... 383,320 00 |

(d) Southern Railway Car Trust, Series A:
Issued as of November 1, 1900, for new equipment, payable in semi-annual installments, last installment due October 31, 1907..... 3,030,000 00 |

Total additions..... \$26,805,512 69 |

Reductions During Year:

East Tennessee, Virginia & Georgia First Mortgage Seven Per Cent. Bonds, matured and paid July 1, 1900.....	\$3,123,000 00
Richmond & Danville Equipment Sinking Fund Five Per Cent. Bonds, retired.....	102,000 00
Georgia Pacific Equipment Sinking Fund Five Per Cent. Bonds, retired.....	107,000 00
Charlotte, Columbia & Augusta First Extended Mortgage Five Per Cent. Bonds, retired.....	357,000 00
Charlotteville & Rapidan First Mortgage Six Per Cent. Bonds, retired.....	15,500 00
Augusta Southern First Mortgage Five Per Cent. Bonds—lease annulled and operation of property discontinued April 25, 1901.....	400,000 00
Equipment Trust Notes of old Companies or their Receivers paid (for details see page 10).....	105,208 98
Miscellaneous Equipment Obligations of Southern Railway Company paid.....	831,319 68
Southern Railway Company Car Trust, Series A, paid.....	225,000 00

Total reductions..... 5,268,028 66 |

Net increase in these accounts as stated..... \$21,539,483 43 |

The increase in securities and equipment obligations outstanding, as stated, is fully represented by the amount of prior-lien securities retired, the cost of new property, or securities outstanding upon properties at the time of their acquisition.

Bonds Reserved for Future Improvements:

First Consolidated Bonds reserved in the hands of the Trustee for future improvements amounted, at the close of the year, to \$11,900,000, issuable only for expenditures for new and additional property under the limitations specified in the mortgage and at a rate not exceeding \$2,000,000 in any one calendar year. One million dollars have been withdrawn during the fiscal year 1901, as shown on page 7. None have been sold during the year.

Memphis Division First Mortgage Bonds similarly reserved for improvements upon the Memphis Division amount to \$1,117,000, to be issued at a rate not exceeding \$100,000 per annum; and, in addition thereto, \$1,500,000 of these bonds are reserved solely for the construction, if determined upon, of a line of railway between Stevenson, Ala., and Chattanooga, Tenn. None of the reserved bonds of this issue have as yet been withdrawn from the Trustee.

There are also reserved, in the hands of the Trustee, \$1,000,000 of Memphis Division Second Mortgage Bonds, issuable for improvements on the Memphis Division at a rate not exceeding \$100,000 per annum. None of the reserved bonds of this issue have as yet been withdrawn from the Trustee.

St. Louis Division First Mortgage Four Per Cent. Bonds similarly reserved for improvements on the St. Louis Division amount to \$3,250,000, to be issued at a rate not exceeding \$500,000 per annum; and, in addition thereto, \$1,000,000 of these bonds are reserved solely for the purpose of constructing or acquiring a new line, or such portion or portions thereof as may be necessary, to avoid the high grades within about seventy-five miles west from New Albany, Ind.

Certificates of Indebtedness:

Of the \$1,716,666.67 Certificates of Indebtedness outstanding June 30, 1900, issued in May, 1899, to provide in part for the purchase of stock of the South Carolina & Georgia Railroad Company and of the Sevier & Knoxville Railroad Company, and of stock and bonds of the Northern Alabama Railway Company and of the Carolina Midland Railway Company, \$516,666.67 were paid during the year, leaving outstanding at the close of the year \$1,200,000.

To provide for advances to the Ensley Southern Railway Company for the construction of its line, there were issued in September, 1900, Southern Railway Company Four Per Cent. Certificates of Indebtedness in the sum of \$300,000, payable in semi-annual installments of \$120,000 each, the first of which was paid March 15, 1901, and the last is payable on March 15, 1903. Of these, \$180,000 are outstanding at the close of the year.

The permanent funding of the indebtedness incurred for the above-named purposes and for the purchase of the Memphis Division has been necessarily deferred longer than was expected, and \$2,000,000 of the current receipts of the Company have been used to pay the maturing certificates.

To reimburse the treasury for a portion of this current outlay there were issued on May 1, 1901, Certificates of Indebtedness in the sum of \$1,500,000, bearing 4 per cent. interest, and payable in five equal semi-annual installments of \$300,000 each, beginning November 1, 1901.

Charges to Capital Account:

(a) For New Construction and Real Estate:
The total expenditures for New Construction and Real Estate charged to Capital Account

during the year have been (see balance sheet, Table 1, "Current New Construction, Year 1900-1901"):

Real Estate at Portsmouth, Va.	\$54,010 95
Real Estate at Asheville, N. C.	2,800 00
Real Estate at Columbia, S. C.	936 00
Real Estate at Port Valley, Ga.	439 67
Real Estate at Decatur, Ala.	1,161 00
Real Estate at Mobile, Ala.	60,000 00
Real Estate at Louisville, Ky.	61,814 95
Real Estate at East St. Louis, Ill.	110,000 00
Real Estate at Madison, Ill.	1,650 00
Right of Way between Asheville, N. C., and Knoxville, Tenn., for improving line.	4,305 00
Miscellaneous Real Estate.	1,902 80
New Coal Station at Branchville, S. C.	2,388 57
New Passenger Station at Summerville, S. C.	3,084 17
Sheffield Machine Works (Sheffield, Ala.)	25,989 20
East St. Louis Union Passenger Station.	2,708 20
Terminal Improvements at Pliner's Point, Va.	8,507 00
Knoxville & Augusta Extension, Maryville, Tenn., to Gamble's Store, Tenn.	25,404 49
Bluemont Extension, Round Hill, Va., to Bluemont, Va.	3,153 90
Additions to General Office Building, Washington, D. C.	4,383 05
For account of sundry surveys.	12,086 84
Additional passing tracks and tracks to industrial plants, 183,184 feet.	\$266,951 89
Less amount charged to Operating Expenses, representing 66,305 feet of track taken up.	97,057 25

Balance representing cost of 116,879 feet of additional track. 169,894 64

Total construction and real estate for the year. \$557,250 54
Less deductions as follows:
Charges to Capital Account for side-tracks in previous years now transferred to Operating Expenses and other accounts. 42,425 93

Total for Construction and Real Estate. \$514,824 61

(b) For New and Additional Equipment:
New and Additional Equipment charged to Capital Account during the year (as shown by the balance sheet, Table 1, "New and Additional Equipment Year 1900-1901")

Representing cost of:	617,983 25
5 Express Cars.	
8 Passenger Cars.	
802 Freight Cars.	
1 Wrecking Crane.	
2 Covered Barges.	

Total charges to Capital Account during the year. \$1,132,807 86

Payments on Account of Equipment Sinking Funds and Equipment Trust Notes:
Equipment Trust Notes of old Companies or their Receivers have been paid during the year as follows:

East Tennessee, Virginia & Georgia Car Trust Notes.	\$37,500 00
Memphis & Charleston Car Trust Notes.	8,159 88
South Carolina & Georgia Car Trust Notes.	34,398 28
Louisville, Evansville & St. Louis Consolidated Car Trust Notes.	24,551 02

Total. \$105,058 98

Sinking Fund payments during the year on account of Equipment Bonds have been:

Richmond & Danville Five Per Cent. Equipment Sinking Fund.	\$108,555 00
Georgia Pacific Five Per Cent. Equipment Sinking Fund.	110,845 00

Total. 219,400 00

Total payments during the year on account of old equipment obligations outstanding upon the several properties at the time of their acquisition. \$324,608 98
Equipment Obligations Outstanding at Close of the Year:

Equipment Obligations outstanding at the close of the year amounted to \$4,137,869.63, consisting of:	
Equipment Trust Notes of the old Companies or of their Receivers, viz.:	
East Tennessee, Virginia & Georgia Car Trust Notes.	\$25,000 00
South Carolina & Georgia Car Trust Notes.	28,232 01
Louisville, Evansville & St. Louis Consolidated Car Trust Notes.	81,641 07

Miscellaneous Equipment Obligations of Southern Railway Co. \$1,227,996 61

Southern Railway Company Car Trust, Series A. 2,775,000 00

Total. \$4,137,869 63

The equipment obligations of the Southern Railway Company proper, amounting to \$4,002,996.61, represent unmatured balances on contracts covering the following equipment, viz.:

3481 Freight Cars received during fiscal year 1900.	
3469 Freight Cars received during fiscal year 1901.	
50 Passenger Cars received during fiscal year 1901.	
83 Locomotives received during fiscal year 1901.	

The contract cost of which was. \$6,389,852 00

Of which there has been paid to June 30, 1901. 2,386,855 39

Balance unmatured as above. \$4,002,996 61

New Equipment Not Charged to Capital Account:

Payments during the year for new equipment purchased and charged to Operating Expenses or to Reserves for Maintenance of Equipment have been. \$1,424,591 29

These charges represent substantially the cost of—

25 Locomotives.	
15 Passenger Cars.	
1223 Freight Cars.	

As against this, equipment was retired during the year as follows:

12 Locomotives.	
11 Passenger Cars.	
682 Freight and Road Service Cars.	

The expenditures for new equipment charged to Operating Expenses or to Reserves for Maintenance reflect the Company's policy of gradually improving the condition, capacity and efficiency of its rolling stock without increasing correspondingly its Capital Account.

The replacement of all equipment retired since the Company commenced operations in 1894 has been fully provided for by charges to Operating Expenses.

INVENTORY OF EQUIPMENT.

As shown in Table 24, the equipment on hand of all lines on June 30, 1901, as compared with June 30, 1900, consisted of:

	June 30, 1901.	June 30, 1900.	Increase.
Locomotives	915	797	118
Passenger Service Cars.	788	714	74
Freight Cars.	33,666	27,368	5,698
Road Service Equipment.	673	576	97
Floating Equipment.	144	139	5

This includes for 1901 equipment received during the year:

With the Louisville, Evansville & St. Louis Consolidated Railroad, viz.:	
52 Locomotives.	
45 Passenger Service Cars.	
2859 Freight Cars.	
38 Road Service Cars.	

Apart from equipment received with the Louisville, Evansville & St. Louis Consolidated Railroad, there was a net increase in available equipment during the year of:

66 Locomotives.	
29 Passenger Service Cars.	
2795 Freight Cars.	
59 Road Service Cars.	

The average capacity of the freight-car equipment of the system in 1900 was 51,619 pounds per car; in 1901 it was 53,916 pounds per car, an improvement of 2.69 per cent.

The average tractive power of the locomotives in 1900 was 3072 tons per engine; in 1901 it was 3390 tons per engine, an improvement of 10.64 per cent.

Floating equipment at the close of the year consisted of 1 Steamer, 3 Steam Tugs, 2 Tow-boats, 13 Barges, 123 Coal Boats, 1 Pump Boat and 1 Pile Driver.

EARNINGS AND EXPENSES.

Upon the acquisition of the St. Louis Division, the Louisville Division, which has no physical connection with the remainder of the system, was attached thereto to form the "St. Louis-Louisville Lines," under charge of a separate General Manager, with headquarters in St. Louis, Mo., and the earnings and expenses and operating statistics for those lines will in future be stated separately from those for the remainder of the system, and the reports of the General Managers now show them in that form, but as the results of operation of the Louisville Division were included with all other lines in previous reports, they are, for purposes of comparison, so included in the following statement, and only those of the St. Louis Division are stated separately for the year just closed.

The Earnings and Expenses of all lines, exclusive of the St. Louis Division, in comparison with those of substantially the same properties in the previous year, were as follows.

	1901.	1900.	Increase.	Per ct. of increase.
Gross Earnings.	\$33,607,581 85	\$31,388,014 86	\$2,219,566 99	7.07
Operating Expenses and Taxes:				
Maintenance of Way and Structures.	\$5,436,748 19	\$4,691,743 99	\$745,004 20	15.87
Maintenance of Equipment.	4,912,530 51	4,677,655 40	234,875 11	5.02
Conducting Transportation.	11,015,859 33	10,525,652 76	490,206 57	4.66
General Expenses.	1,105,111 67	1,025,370 26	79,741 41	7.77
Taxes.	1,007,241 96	1,051,210 86	43,968 90	4.18*
Total.	\$23,477,551 66	\$21,971,633 27	\$1,505,918 39	6.85

Net Earnings from Operation. \$10,130,030 19

Ratio of Expenses to Earnings. 69.86%

*Decrease.

For details of Earnings and Expenses (exclusive of the St. Louis Division) see Table 12 page 53.

The chief increases in Maintenance of Way and Structures have been:

Repairs of Roadway.	\$315,697 12
Renewal of Rails.	263,118 80
Renewal of Bridges.	123,066 36

There were laid during the year 32,109 tons, or 255 miles, of new steel rail, as compared with 27,517 tons, or 213 miles, laid the year preceding.

New ballast was placed in the track during the year to the extent of 236,577 cubic yards, or about 400 miles. The total ballasted track on June 30, 1901, was 287.06 miles, or about 45.97 per cent. of the total mileage maintained.

Of the cost of renewal of bridges, the sum of \$268,635.12 was expended for new steel bridges to replace wooden or other inferior structures.

The chief increases in Maintenance of Equipment have been:

Repairs and Renewals of Passenger Cars.	\$85,955 76
Repairs and Renewals of Freight Cars.	140,102 44
Repairs and Renewals of Marine Equipment.	86,538 50

The expenses of conducting transportation increased \$190,065.57, or 4.66 per cent. Of this increase the chief item was an increase in cost of fuel of \$231,383.03, or about 47.20 per cent. of the total increase in conducting transportation.

General expenses and taxes increased \$57,725.51, or 1.72 per cent., the chief items of increase being in Insurance and Law Expenses.

The Earnings and Expenses of the St. Louis Division for the entire year (operated six months by the Receiver of the Louisville, Evansville & St. Louis Consolidated Railroad Company and six months by the Southern Railway Company) were:

	1901.	1900.	Increase.	Per ct. of increase.
Gross Earnings.	\$2,090,190 15	\$1,920,804 72	\$169,385 43	8.82
Operating Expenses and Taxes:				
Maintenance of Way and Structures.	\$286,869 79	\$304,697 97	\$28,171 82	26.96
Maintenance of Equipment.	227,641 48	195,358 65	32,282 83	16.52
Conducting Transportation.	783,092 14	683,006 20	90,085 94	13.00
General Expenses.	131,328 19	66,121 74	65,206 45	98.61
Taxes.	86,350 19	82,928 71	3,421 48	4.83
Total.	\$1,615,361 79	\$1,342,113 27	\$273,248 52	20.40

Net Earnings from Operation. \$474,828 36

Ratio of Expenses to Earnings. 77.31%

*Decrease.

For details of Earnings and Expenses of the St. Louis Division see Table 13, page 54.

The increase in Operating Expenses of the St. Louis Division is due principally to much larger expenditures for Maintenance of Way and of Equipment charged to operation than the Receiver had made the year preceding, he having charged to betterment account many items which the Company charges to expenses.

The increase in Conducting Transportation was due largely to the increased cost of fuel and to increased service.

The large increase in General Expenses was due to special charges incident to the closing of the Receivership and the purchase of the property.

The entire interest charges on account of the purchase of the St. Louis Division are \$430,000 per annum, as compared with net earnings of \$17,428.35, shown in the foregoing statement.

REDUCTION OF GRADES AND CURVATURE.

During the fiscal year the ruling grades and curvature on the entire line between Knoxville, Tenn., and Asheville, N. C., 129.2 miles, have been so reduced that the trainload of the standard freight engine on that division has been increased from 850 tons to 1200 tons, or 41.18 per cent. The cost, \$209,708.36, has been charged against income.

Similar improvements have now begun on the line between Asheville and Salisbury, N. C., to establish the same ruling grades, except at the mountain summit, where the use of helping engines must be continued. When this work shall have been completed, a year hence, a standard freight engine will be able to haul a uniform train of 1200 tons from Knoxville, Tenn., to Pliner's Point (Norfolk, Va.), 584.18 miles, except over the one grade at the mountain summit east of Asheville, above referred to.

Contracts have been awarded for reduction of the grades on the St. Louis Division between East St. Louis, Ill., and Princeton, Ind., 158.6 miles, to a maximum of forty-two feet per mile, but with a maximum of twenty-six feet per mile westbound from the Illinois coal fields into East St. Louis. The estimated cost of the work is \$320,000. This improvement will increase the hauling capacity of the present locomotives on the entire 158.6 miles about 30 per cent. When the track and bridges shall have been sufficiently strengthened, and standard locomotives used, the economy will be still further increased.

ADDITIONAL PROPERTIES.

St. Louis Division:

The Company acquired as of January 1, 1901, the property and franchises of the Louisville, Evansville & St. Louis Consolidated Railroad, paying therefor \$10,750,000 of its St. Louis Division First Mortgage Forty-Year Four Per Cent. Gold Bonds.

The property consists of 374.34 miles of railway between East St. Louis, Ill., and New Albany, Ind., including the Evansville and other branches, important and especially valuable terminals at East St. Louis, and the equipment as specified elsewhere in this report.

Even under very liberal charges to expenses for maintenance and improvement of the property, which are and will continue to be necessary for some time to come, the fixed charges are more than earned, and it is already evident that substantial improvements can be made in both the gross and net earnings when adequate equipment shall have been provided and other needed betterments made.

Mobile & Ohio Railroad:

The Southern Railway Company purchased in March last a large majority of the General Mortgage Four Per Cent. Bonds and of the Capital Stock of the Mobile & Ohio Railroad Company, paying therefor, respectively, its Mobile & Ohio Collateral Four Per Cent. Fifty-Year Gold Bonds, and its Mobile & Ohio Stock Trust Certificates, upon which dividends, payable October 1 and April 1, will be paid as follows: Two per cent. for the first year, 3 per cent. for the second year and 4 per cent. thereafter.

At the close of the year there were outstanding on this account:

(a) Southern Railway Mobile & Ohio Collateral Four Per Cent. Bonds.	\$7,824,000
(b) Southern Railway Mobile & Ohio Stock Trust Certificates.	4,896,900

Against which, respectively, there had been deposited with the Guaranty Trust Company of New York, Trustee:

(a) Mobile & Ohio Railroad Company General Mortgage Four Per Cent. Bonds.	\$7,824,000
(b) Certificates of Stock of the Mobile & Ohio Railroad Co.	4,896,900

The Mobile & Ohio Railroad is operated by its own Board of Directors and officers, and the results of its operations are not included in those of the Southern Railway Company.

Savannah Extension:

As indicated in the last annual report, the Savannah Extension of the Carolina Midland Railway from Allendale, S. C., to Hardeeville, S. C., 51.50 miles, has been constructed, and was opened for traffic on December 10, 1900, going away with trackage over the Charleston & Western Carolina Railway, 34.70 miles, and diminishing the trackage over the Plant System, 30.50 miles, thus shortening the distance from Columbia, S. C., to Savannah, Ga., 12.7 miles.

Trackage rights are still availed of and have been made permanent over the Plant System tracks from Hardeeville to Central Junction, near Savannah, a distance of 23.3 miles, and a contract has been made with the Central of Georgia Railway Company for permanent trackage rights from Central Junction into the freight terminals of that Company in Savannah, 3.37 miles. Freight terminals in Savannah have been leased in perpetuity from the Central of Georgia Railway Company.

At Central Junction connection will be made with the tracks of the Savannah Union Station Company, in which Company the Southern Railway Company has a one-third ownership, with perpetual right of use of the properties for its passenger trains.

It is now expected that the Savannah Union Station will be ready for occupancy next winter.

Augusta Southern Railroad:

Under suit at law, begun by the stockholders of the Augusta Southern Railroad Company prior to the purchase of the stock and the lease of the property of the South Carolina & Georgia Railroad Company by the Southern Railway Company, the lease of the Augusta Southern Railroad to the South Carolina & Georgia Railroad Company was annulled by court on April 25, 1901, and the operation of the Augusta Southern Railroad property by the South Carolina & Georgia Railroad Company and by the Southern Railway Company ceased on that date.

The Southern Railway Company has purchased a majority of the Capital Stock of the Augusta Southern Railroad Company.

GENERAL REMARKS.

The property of the Company was considerably damaged and traffic more or less delayed during May and June by floods, especially in North Carolina and in Tennessee. The cost of repairs on this account was approximately \$122,000.

On May 30, 1901, the machinists in most of the Company's shops, together with a few apprentices and helpers, struck on account of the Company's refusal to accept formal demands made by the International Association of Machinists, through a Committee of the

Company's employees, for a reduction of shop hours—from ten hours per day to nine—with-out reduction of wages; a prescribed limitation upon the relative number of apprentices to be employed in each shop; certain rules as to payment for overtime, and other regulations as to the conduct of shops. Many of the demands were unreasonable in themselves and could not have been acceded to; but, aside from this consideration, they were in the form of an ultimatum, in writing, with the frank avowal that they must be granted as a whole, or a strike would ensue. The subject-matter was discussed by the Company's officers, with explanations that arbitrary rules laid down by others could not be adopted in the management of the Company's affairs, and another conference was offered in case the employees should so desire, after examining the printed report of the proceedings of the meeting between the General Manager and the Committee. This was of no avail, and the misguided men struck. All of them are still out of the Company's service. On the date of this report over 85 per cent. of their places have been filled.

Although there has been some violence at certain points, there has been no damage to the Company's property and no delay to traffic on account of the strike.

The Board of Directors records with a sense of deep regret the death, on July 12, 1901, of Mr. Skipton Willmer, who, from the formation of the Company, had been an active and useful member of the Board, manifesting at all times an earnest interest in the affairs of the Company, and laboring intelligently and wisely for its welfare and advancement.

His long association with the Atlanta & Charlotte Air Line Railway Company as Director and as Counsel made him familiar with transportation and economic problems in the South, especially in their relation to the laws and to the public, and his high character and broad sense of fairness qualified him in a marked degree to deal effectively with such problems as they arose.

He represented the Atlanta & Charlotte Air Line Company in the negotiations which brought that property into the Southern Railway System, and the qualities then displayed made him a most welcome associate in the future management of the entire system.

The members of the Board extend to his family their most sincere condolences, and order

that this minute be spread upon the records and that a copy be forwarded to the members of his family.

The accounts of the Company have been examined by certified public accountants, Messrs. Patterson, Teele & Dennis, and their certificate is attached hereto.

Special attention is directed to the reports of the General Managers and to the annexed tables for statistics, details of earnings and expenses, materials used, betterments made and economies accomplished in the operation of the property.

The acknowledgments of the Board are due to all officers and employees for the faithful discharge of their duties during the year.

Respectfully submitted, by order of the Board,

SAMUEL SPENCER, President.

Accountants' Certificate.

Andrew S. Patterson, C. P. A. Stuart H. Patterson, C. P. A.
Arthur W. Teele, C. P. A. Francis R. Roberts, C. P. A.
Rodney S. Dennis, C. P. A. Richard T. Lingley, C. P. A.
John Whitmore. J. S. M. Goodloe.

PATTERSON, TEELE & DENNIS,
Certified Public Accountants,

30 Broad Street.

New York, August 12, 1901.

To the Stockholders and Bondholders of the Southern Railway Company:

We have made an examination of the books and accounts of the Southern Railway Company for the fiscal year ended June 30, 1901, and hereby certify that the Balance Sheet and Income and Profit and Loss Accounts published herewith are in accordance with the books, and we have satisfied ourselves that they accurately set forth the result of the year's operations and the financial condition as at June 30, 1901.

PATTERSON, TEELE & DENNIS,
Certified Public Accountants.

TABLE 1.

COMPARATIVE BALANCE SHEET, JUNE 30, 1901, AND JUNE 30, 1900.

June 30, 1900.	June 30, 1901.	June 30, 1901.
\$253,832,997 02		\$263,608,278 65
Assets.		
Cost of Road: Southern Railway Properties.....		
Viz.: Total to June 30, 1900.....	\$253,832,997 02	
Louisville, Evansville & St. L. C. R. R.....	9,317,503 72	
Current New Construction, year 1900-1901.....	514,824 61	
Less Sundry Adjustments.....	\$263,665,325 35	
	57,046 70	
	\$263,608,278 65	
Leasehold Estates (Per Contra).....		24,173,751 21
Total Cost of Road.....		\$287,782,029 86
Cost of Equipment: Equipment Owned.....		\$12,780,164 18
Viz.: Total to June 30, 1900.....	\$11,028,985 18	
Received with L. E. & St. L. C. R. R.....	1,134,320 75	
New and Additional Equipment, year 1900-1901.....	617,983 25	
Less Sundry Adjustments.....	\$12,781,289 18	
	1,125 00	
	\$12,780,164 18	
Trust Equipment Received with Purchased Properties.....		1,818,142 00
Miscellaneous—Southern Railway Trust Equipment (Per contra).....		1,227,986 61
Southern Railway Trust Equipment, Series A. (Per contra).....		2,775,000 00
Equipment Leasehold Estates. (Per contra).....		1,386,102 69
Viz.: North Carolina R. R.....	\$105,000 00	
Atlanta & Charlotte Air Line Ry.....	194,005 00	
Georgia Midland Ry.....	76,150 00	
South Carolina & Georgia R. R.....	475,286 19	
Mobile & Birmingham R. R.....	191,240 00	
Richmond & Mecklenburg R. R.....	2,837 00	
Atlantic & Danville Ry.....	341,584 50	
	\$1,386,102 69	
Equipment Other Lines. (Per contra).....		3,640 00
Total Cost of Equipment.....		19,991,045 48
Total Cost of Road and Equipment.....		\$307,773,075 34
Cost of Securities Pledged or Held for Control: Pledged under First Consolidated Mortgage (See Table 7, page 47).....		\$13,548,927 40
Pledged under Memphis Division First Mortgage.....		700,000 00
Pledged to secure Southern Ry. Certificates of Indebtedness.....		7,128,378 16
United States Bonds deposited under North Carolina R. R. Lease.....		182,750 00
Securities in Treasury unpledged, held for control or as muniments of title (See Table 8, page 48).....		1,257,804 34
Mobile & Ohio General Mortgage 4 per cent. Bonds, pledged with the Guaranty Trust Co.....		7,824,000 00
Mobile & Ohio Capital Stock, pledged with the Guaranty Trust Co.....		4,896,900 00
		35,538,759 90
Cost of Road, Equipment and Securities Held as Stated.....		\$343,311,835 24
Material and Supplies on Hand (See Table 9, page 49).....		\$1,635,259 86
Rails and Fixtures—Leased.....		150,051 59
		1,785,311 45
Total Capital Assets.....		\$345,097,146 69
Southern Railway Co. Consolidated Mortgage Bonds in Treasury.....		2,538,000 00
Miscellaneous Securities Owned, in Treasury unpledged.....		3,099,538 13
Securities Owned, deposited under contracts.....		201,651 62
Bills Receivable—deferred but secured.....		11,117 30
Insurance Paid, not Accrued.....		114,881 63
Sinking Funds—Uninvested Balances in hands of Trustees.....		176,853 29
Insurance Fund, in hands of Trustees.....		229,100 76
Sundry Accounts.....		
Current Assets: Cash in hands of Treasurer and in hands of Financial Agents.....		\$3,557,347 26
Cash in transit from agencies.....		630,221 71
Due from Agents and Conductors.....		621,458 04
Due from United States Postoffice Department.....		393,223 64
Due from Connecting Lines.....		545,305 34
Due from Individuals and Companies.....		943,252 44
Bills Receivable—current.....		55,294 77
Total Current Assets.....		6,746,103 20
		\$351,843,249 89
LIABILITIES.		
Capital Stock: Common.....		\$120,000,000 00
Preferred.....		60,000,000 00
Total.....		\$180,000,000 00
Mobile & Ohio Stock Trust Certificates.....		180,000,000 00
Funded Debt (see Table 5, page 45).....		4,896,900 00
Outstanding Securities of Leasehold Estates (see Table 6, page 46): Atlanta & Charlotte Air Line Ry.....		\$7,200,000 00
North Carolina R. R.....		4,000,000 00
Georgia Midland Ry.....		1,650,000 00
South Carolina & Georgia R. R.....		5,250,000 00
Augusta Southern R. R.....		400,000 00
Mobile & Birmingham R. R.....		2,700,000 00
Richmond & Mecklenburg R. R.....		315,000 00
Atlantic & Danville Ry.....		4,337,200 00
Sumter & Wateree River R. R.....		100,000 00
Total.....		25,552,200 00
Equipment Notes of Old Companies or Their Receivers: East Tennessee, Virginia & Georgia Ry. Equipment Notes.....		\$25,000 00
Memphis & Charleston R. R. Equipment Notes.....		28,232 01
South Carolina & Georgia R. R. Equipment Notes.....		81,641 07
Louisville, Evansville & St. Louis Con. R. R. Equipment Notes.....		
Equipment Obligations of Southern Railway Co.: Miscellaneous Equipment obligations unmatured (per contra).....		\$1,227,986 61
Southern Railway Car Trust, Series A (per contra).....		2,775,000 00
Certificates of Indebtedness: Account purchase, Memphis Division.....		4,002,966 61
Account purchase, South Carolina & Georgia R. R. Stock and Northern Alabama Ry. Bonds and Stock.....		\$1,200,000 00
Account purchase, Carolina Midland Ry. Bonds and Stock and Sevier & Knoxville R. R. Stocks.....		1,000,000 00
Account Extension Carolina Midland Ry.....		480,000 00
Account Construction Ensley Southern Railway.....		1,500,000 00
Issued May 1, 1901 (see page 9).....		
Total.....		4,180,000 00
Unpaid Balance of Purchase Price of Northeastern R. R. of Georgia.....		107,000 00
Unpaid Balance on Real Estate.....		75,000 00
Equipment Other Lines: Roswell R. R.....		3,640 00
Total Capital, Funded and Lien Liabilities.....		\$343,534,309 69
Reserves: For Maintenance of Way.....		\$513,947 80
For Maintenance of Equipment.....		530,031 97
For Insurance.....		176,853 29
Miscellaneous.....		823,082 78
Total.....		2,043,915 84

52,500 66	Sundry Accounts.....	39,960 44
586,460 25	Interest and Rentals Accrued, not Due.....	746,838 16
350,085 26	Taxes Accrued, not due.....	356,070 82
	Reserved for pay Venice & Carondelet Bonds, due April 1, 1902.....	50,000 00
900,000 00	Reserved for Dividend No. 6, 1½ per cent., on Preferred Stock, payable in October, 1900, and for Dividend No. 8, 2 per cent., on Preferred Stock, payable in October, 1901.....	1,200,000 00
	Current Liabilities:	
\$1,909,067 27	Interest and Rentals Due and Unpaid, including amount due July 1, 1900 and 1901.....	\$2,112,635 27
2,048,293 35	Audited Vouchers (including new construction and new equipment).....	1,489,612 27
1,114,111 60	Unpaid Wages, including June Pay-Rolls.....	1,179,777 07
35,667 03	Foreign Freight Claims; Authorities Outstanding.....	49,718 44
291,533 11	Due Connecting Lines.....	460,595 34
631,040 72	Due Individuals and Companies.....	324,305 46
6,129,813 08	Total Current Liabilities.....	5,606,643 85
3,510,701 86	Profit and Loss (see Tables 2 and 4).....	4,637,253 71
\$328,750,820 41		\$358,214,392 51

TABLE 2.		INCOME ACCOUNT FOR YEAR ENDED JUNE 30, 1901, COMPARED WITH YEAR ENDED JUNE 30, 1900.			
1900.		So. Ry. System, Exclusive of St. Louis Div.	St. Louis Div., 6 Months to June 30, 1901.	1901.	
Gross Earnings:					
\$7,737,454 11	Passenger.....	\$8,616,563 96	\$201,722 96	\$8,818,286 91	Total Gross Earnings.....
21,006,730 33	Freight.....	22,205,533 82	723,961 81	22,929,495 63	
1,327,807 12	Mail.....	1,508,347 91	27,553 38	1,535,901 29	
638,513 97	Express.....	653,536 77	21,550 00	675,086 77	
490,361 36	Miscellaneous.....	623,589 39	77,910 19	701,509 58	
\$31,200,869 89		\$33,607,581 85	\$1,052,900 33	\$34,660,482 18	
Operating Expenses and Taxes:					
\$4,665,231 20	Maintenance of Way and Structures.....	\$5,436,748 19	\$249,344 13	\$5,686,092 32	Total Operating Expenses and Taxes.....
4,635,351 23	Maintenance of Equipment.....	4,912,590 51	125,582 40	5,038,172 91	
10,475,930 11	Conducting Transportation.....	11,015,859 32	398,876 48	11,414,735 81	
1,007,143 46	General Expenses.....	1,105,111 67	48,704 23	1,153,815 90	
1,047,790 86	Taxes.....	1,007,241 96	43,566 19	1,050,808 15	
21,831,446 86		\$23,477,551 66	\$866,073 43	\$24,343,625 09	
\$9,369,423 03	Net Income from Operations.....			\$10,316,857 09	
Income from Investments:					
\$6,125 00	Interest on Chester & Lenoir Railroad Co. Bonds.....			\$3,112 84	
97,084 13	Dividends on Alabama Great Southern Ry. Co., Ltd. Stock.....			127,181 23	
117,541 50	Dividends on Atlantic Coast Line R. R. Co., and Georgia Southern & Florida Ry. Co. Stocks, and Interest and Dividends on Alabama Steel & Shipbuilding Co. Bonds and Stock.....			109,632 00	
5,100 00	Interest on U. S. Government Bonds.....			5,100 00	
13,171 67	Interest on Northern Alabama Ry. Co. Bonds.....			43,078 80	
28,806 78	Dividends on Birmingham Southern R. R. Co. Stock.....			30,782 91	
2,000 00	Interest and Dividends on Hartwell Ry. Co. Bonds and Stock.....			2,000 00	
	Interest on Kentucky & Indiana Bridge & R. R. Co. Bonds.....			12,960 00	
	Dividends on Old Dominion Steamship Co. Stock.....			5,574 25	
1,588 80	Accrued Interest on Mobile & Ohio R. R. General Mortgage Bonds.....			104,320 00	
276,417 88	Income from Miscellaneous Securities.....			2,074 15	
	Total Income from Investments.....			445,816 18	
\$28,910 85	Miscellaneous Income from Other Sources:			\$12,245 84	
13,476 75	Net Income from Compresses and Other Property.....			20,643 89	
42,387 60	Earnings from Shepherd's Ferry, Alexandria, Va.....				
\$9,688,228 51	Total Miscellaneous Income from Other Sources.....			52,889 73	
\$6,755,442 30	Total Available Income.....			\$10,815,563 00	
13,022 53	Fixed Charges, including Rentals (see Table 3, page 43).....			\$7,181,296 86	
2,512 18	Miscellaneous Deductions from Income:				
6,770,977 01	Dividends Accrued on Southern Railway-Mobile & Ohio Stock Trust Certificates, \$4,896,900, 2 per cent., 3 months.....			24,484 50	
\$2,917,251 50	Miscellaneous Interest and Commissions.....			62,803 47	
\$900,000 00 (1½%)	Other Miscellaneous Deductions from Income.....			6,479 13	
900,000 00 (1½%)	Total.....			7,275,062 96	
1,800,000 00	Net Income for the Year.....			\$3,540,500 04	
\$1,117,251 50	From which Deduct:				
	Dividends Nos. 5 and 7 on Preferred Stock.....			\$1,200,000 00	
	Dividends Nos. 6 and 8 on Preferred Stock, payable in October, 1900 and 1901, but reserved out of income for fiscal year ended June 30, 1900 and 1901.....			1,200,000 00	
	Total Dividends.....			2,400,000 00	
	Balance Carried to Credit of Profit and Loss for the Year.....			\$1,140,500 04	

TABLE 3.		STATEMENT OF INTEREST AND RENTALS FOR YEAR ENDED JUNE 30, 1901, COMPARED WITH YEAR ENDED JUNE 30, 1900.			
Class.		Period.	1900.	1901.	
Southern Ry. C. 1st Cons. Mtge.....	12 months.	12 months.	\$33,158,000 00	\$1,657,900 00	\$1,435,440 00
	6 months.	6 months.	357,000 00	8,925 00	
East Tenn. Reorganization Mtge.....	12 months.	12 months.	\$33,515,000 00	\$1,666,825 00	\$1,435,440 00
Memphis Division 1st Mtge.....	12 months.	12 months.	4,500,000 00	235,000 00	225,000 00
Alben Branch 1st Mtge.....	12 months.	12 months.	5,083,000 00	203,320 00	203,320 00
St. Louis Division 1st Mtge.....	12 months.	12 months.	150,000 00	6,000 00	6,000 00
Mobile & Ohio Collateral Mtge.....	6 months.	6 months.	10,750,000 00	41,000 00	41,000 00
Car Trust, Series "A".....	4 months.	4 months.	7,821,000 00	104,320 00	22,500 00
Certificates of Indebtedness:	6 months.	6 months.	2,775,000 00	69,922 82	
Account of Memphis Division.....	5 months.	12 months.		5,000 00	28,000 00
Account of purchase South Car. & Ga. and North Ala. Securities.....	12 months.	12 months.		72,722 23	91,055 55
Account of purchase Carolina Mid. and Sevier & Knox Securities.....	4 m. 15 d.	12 months.		2,187 51	13,222 22
Account Extension Carolina Midland.....	12 months.	15 days.		40,111 11	1,666 66
Account Ensley Southern Construction.....	9 m. 15 d.			17,600 00	
Issued May 1, 1901, (see page 9).....	10 months.			10,000 00	
Richmond & Danville 1st Cons. Mtge.....	12 months.	12 months.	5,297,000 00	359,820 00	359,820 00
Debtenture Mtge.....	12 months.	12 months.	3,368,000 00	168,400 00	168,400 00
Eq. S. F. Mtge.....	12 months.	12 months.	595,000 00	31,708 32	35,450 00
Wash., Ohio & West. 1st Mtge.....	12 months.	12 months.	1,025,000 00	41,000 00	41,000 00
Rich., York River & Ches. 1st Mtge.....	12 months.	12 months.	400,000 00	20,000 00	20,000 00
Atl., Tenn. & Ohio 1st Mtge.....	12 months.	12 months.	500,000 00	22,500 00	22,500 00
West, North Carolina 1st Cons. Mtge.....	12 months.	12 months.	150,000 00	3,000 00	3,000 00
Char., Col. & Aug. 1st Ext. Mtge.....	12 months.	12 months.	2,531,000 00	151,860 00	151,860 00
2d Mtge.....	12 months.	12 months.	1,640,500 00	98,950 00	98,950 00
Columbia & Greenville 1st Mtge.....	12 months.	12 months.	500,000 00	35,000 00	35,000 00
East Tenn., Va. & Ga. 1st Mtge.....	12 months.	12 months.	2,000,000 00	120,000 00	120,000 00
1st Mtge.....	12 months.	12 months.	3,123,000 00	218,610 00	218,610 00
Cons. Mtge.....	12 months.	12 months.	3,106,000 00	155,300 00	155,300 00
Alabama Central 1st Mtge.....	12 months.	12 months.	12,770,000 00	638,500 00	638,500 00
Knoxville & Ohio 1st Mtge.....	12 months.	12 months.	60,000 00	60,000 00	60,000 00
Georgia Pacific 1st Mtge.....	12 months.	12 months.	2,000,000 00	120,000 00	120,000 00
Eq. S. F. Mtge.....	12 months.	12 months.	5,660,000 00	339,600 00	339,600 00
Virginia Midland, Serial A Mtge.....	12 months.	12 months.	175,000 00	10,541 67	14,860 00
B Mtge.....	12 months.	12 months.	600,000 00	36,000 00	36,000 00
C Mtge.....	12 months.	12 months.	1,900,000 00	114,000 00	114,000 00
D Mtge.....	12 months.	12 months.	1,100,000 00	66,000 00	66,000 00
E Mtge.....	12 months.	12 months.	950,000 00	41,166 67	38,000 00
F Mtge.....	12 months.	12 months.	1,775,000 00	88,750 00	88,750 00
General Mtge.....	12 months.	12 months.	1,310,000 00	65,500 00	65,500 00
Spart., Union & Col. 1st Mtge.....	12 months.	12 months.	4,859,000 00	242,950 00	242,950 00
Georgia Midland 1st Mtge.....	12 months.	12 months.	1,000,000 00	40,000 00	40,000 00
Atlantic & Yadkin 1st Mtge.....	12 months.	12 months.	1,650,000 00	49,500 00	49,500 00
Venice & Carondelet 1st Mtge.....	6 months.	12 months.	1,500,000 00	60,000 00	60,000 00
Atlanta & Charlotte Air Line 1st Mtge, Pref.....	12 months.	12 months.	50,000 00	1,500 00	
1st Mtge.....	12 months.	12 months.	500,000 00	20,000 00	20,000 00
Income Extended.....	12 months.	12 months.	4,250,000 00	297,500 00	297,500 00
Stock.....	12 months.	12 months.	750,000 00	30,000 00	41,250 00
Organization Exp.....	12 months.	12 months.	1,700,000 00	107,666 66	102,000 00
Charlottesville & Rapidan R. R. Rental.....	12 months.	12 months.		4,000 00	4,000 00
North Carolina R. R. Rental.....	12 months.	12 months.		35,300 00	35,300 00
South Car. & Ga. R. R. Rental.....	12 months.	12 months.		266,000 00	266,000 00
Mobile & Birmingham R. R. Rental.....	12 months.	12 months.		283,888 89	287,083 33
Atlantic & Danville Ry. Rental.....	12 months.	12 months.		96,000 00	96,000 00
Richmond & Mecklenburg R. R. Rental.....	12 months.	10 months.		127,000 00	105,833 34
Athens Belt Line Rental.....	12 months.	12 months.		12,600 00	12,600 00
W. & W. R. R. and Norfolk & Carolina R. R.—	12 months.	12 months.		1,950 00	1,950 00
Trackage and Real Estate Rental.....	12 months.	12 months.		69,790 31	69,498 64
Charleston & Savannah Ry. Trackage.....	12 months.	6 m. 21 d.		7,732 36	6,022 56
Charleston & West. Car. Ry. Trackage.....	5 m. 9 d.	7 months.		4,629 00	6,125 00
Central of Georgia Ry. Trackage.....	7 months.			583 31	

Amount stated in Income Account, Table 2, page 42.
 as months, less adjustment of interest in connection with advances made under the Trust. 66 months on \$1,997,500, 6 months on \$1,640,500. 68 months at 4½, 4 months at 5½. 68 months at 6½, 4 months at 7½. 12 months on \$28,639,000 and 18 days on \$1,396,000. 79 months at 6½, 3 months at 4½.

TABLE 4.—PROFIT AND LOSS ACCOUNT FOR YEAR ENDED JUNE 30, 1901.

Balance at Credit of Profit and Loss Account, June 30, 1900	\$3,510,701 86
Add:	
Credit Balance of Income Account for year ended June 30, 1901	1,140,500 04
Premium on sale of \$3,123,000 Southern Railway Company First Consolidated Mortgage Bonds, issued to retire East Tenn., Va. & Ga. R. R. Co. First Mortgage 5% Bonds, due July 1, 1900.....	187,380 00
Miscellaneous Small Credits	11,117 75
	<u>\$4,849,699 65</u>
Deduct:	
Several amounts charged to Profit and Loss for bad debts and reduction of book value of Miscellaneous Securities in treasury, including Capital Stock and debts of Augusta Southern Railroad Company, South Atlantic Export Company and others	212,445 94
Credit Balance carried forward June 30, 1901.....	<u>\$4,637,253 71</u>

TABLE 5.—FUNDED DEBT JUNE 30, 1901, COMPARED WITH JUNE 30, 1903.

Classes of Bonds.	Principal due.	Interest. Due.	Rate per ct.	Amount outstanding.	
				June 30, 1901.	June 30, 1900.
Southern Ry.:					
1st Consolidated Mortgage Bonds.....	1894	J. & J.	5	\$36,053,000	\$31,311,000
" East Tennessee " Reorg. Mort. Bonds.....	1898	M. & S.	5	4,500,000	4,500,000
Memphis Division 1st Mortgage Bonds.....	1906	J. & J.	4 4½ 5	5,083,000	5,083,000
Memphis Division 2d Mortgage Bonds (owned by Southern Railway Co.....	1896	A. & O.	5	1,500,000	1,500,000
Aliken Branch 1st Mortgage Bonds.....	1898	J. & J.	4	150,000	150,000
St. Louis Division 1st Mortgage Bonds.....	1861	J. & J.	4	10,750,000	
* Mobile & Ohio Coalateral Bonds.....	1898	M. & S.	4	7,824,000	
Richmond & Danville R. R.:					
Consolidated Mortgage Bonds.....	1915	J. & J.	6	5,997,000	5,997,000
Debenture Mortgage Bonds.....	1897	A. & O.	5	3,398,000	3,398,000
Equip. Sinking Fund Mort. Bonds.....	Var. dates.	M. & S.	5	595,000	607,000
Washington, Ohio & Western R. R.					
1st Mortgage Bonds.....	1894	F. & A.	4	1,025,000	1,025,000
Richmond, York River & Chesapeake R. R.:					
1st Mortgage Bonds.....	1910	J. & J.	5	400,000	400,000
2d Mortgage Bonds.....	1910	M. & N.	4½	500,000	500,000
Atlantic, Tennessee & Ohio R. R.:					
1st Mortgage Bonds.....	1913	A. & O.	6	150,000	150,000
Western North Carolina R. R.:					
1st Consolidated Mortgage Bonds.....	1914	J. & J.	6	2,531,000	2,531,000
Charlotte, Columbia & Augusta R. R.:					
1st Extended Mortgage Bonds.....	1909	J. & J.	5	1,640,500	1,097,500
2d Mortgage Bonds.....	1902	A. & O.	7	500,000	500,000
Columbia & Greenville R. R.:					
1st Mortgage Bonds.....	1916	J. & J.	6	2,000,000	2,000,000
East Tennessee, Virginia & Georgia Ry.:					
1st Mortgage Bonds.....	1900	J. & J.	7	3,123,000
1st Mortgage Bonds.....	1930	J. & J.	5	3,106,000	3,106,000
Consolidated Mortgage Bonds.....	1906	M. & N.	5	12,770,000	12,770,000
Alabama Central R. R.:					
1st Mortgage Bonds.....	1918	J. & J.	6	1,000,000	1,000,000
Georgia Pacific Ry.:					
1st Mortgage Bonds.....	1922	J. & J.	6	5,660,000	5,660,000
Equip. Sinking Fund Mort. Bonds.....	Var. dates.	F. & A.	5	175,000	282,000
Knoxville & Ohio R. R.:					
1st Mortgage Bonds.....	1925	J. & J.	6	2,000,000	2,000,000
Spartanburg, Union & Columbia R. R.:					
1st Mortgage Bonds.....	1905	J. & J.	4	1,000,000	1,000,000
Virginia Midland Ry.:					
Serial Mortgage Bonds, Series A.....	1906	M. & S.	6	600,000	600,000
" " " " " B.....	1911	M. & S.	6	1,000,000	1,000,000
" " " " " C.....	1916	M. & S.	6	1,000,000	1,000,000
" " " " " D.....	1921	M. & S.	6	950,000	950,000
" " " " " E.....	1926	M. & S.	5	1,775,000	1,775,000
" " " " " F.....	1931	M. & S.	5	1,310,000	1,310,000
General Mortgage Bonds.....	1936	M. & N.	5	4,859,000	4,859,000
Charlottesville & Rapidan R. R. 1st Mort. Bonds.....	1913	J. & J.	6	310,200	325,700
Atlantic & Yadkin Ry.:					
1st Mortgage Bonds.....	1919	A. & O.	4	1,500,000	1,500,000
Total as per balance sheet.....				\$124,581,700	\$104,970,200
* Including \$1,276,000 free in Company's treasury June 30, 1900.				† Including \$2,538,000 free in Company's treasury June 30, 1901.	

TABLE 6.—OUTSTANDING SECURITIES OF LEASEHOLD ESTATES.

Atlanta & Charlotte Air Line Ry.	Principal due.	Interest Due.	Rate.	Amount outstanding.	
				June 30, 1901.	June 30, 1900.
1st Mort. Bonds.....	1907	A. & O.	4%	\$500,000	\$500,000
1st Mort. Bonds	1907	J. & J.	7%	4,250,000	4,250,000
Income Mort. Bonds, Ext.....	1907	A. & O.	4%	750,000	750,000
Stock.....		M. & S.	6-7%	1,700,000	1,700,000
				\$7,200,000	\$7,200,000
North Carolina R. R.:					
Stock		J. & J.	"	4,000,000	4,000,000
Georgia Midland Ry.:					
1st Mort. Bonds	1946	A. & O.	3%	1,650,000	1,650,000
So. Carolina & Georgia R. R.:					
1st Mort. Bonds.....	1919	M. & N.	5%	5,250,000	5,250,000
Augusta Southern R. R.:					
1st Mort. Bonds	1924	J. & D.	5%	Lease annu- 100,000	100,000
Sumter & Wateree River R. R.:					
1st Mort. Bonds	1919	A. & O.	5%	100,000	100,000
Mobile & Birmingham R. R.:					
Prior Lien Bonds	1945	J. & J.	5%	\$600,000	\$600,000
1st Mort. Bonds.....	1945	J. & J.	4%	1,300,000	1,300,000
Preferred Stock.....		J. & D.	"	900,000	900,000
				2,700,000	2,700,000
Rich. & Mecklenburg R. R.:					
1st Mort. Bonds.....	1948	M. & N.	4%	315,000	315,000
Atlantic & Danville Ry.:					
1st Mort. Bonds	1950	J. & J.	5%	\$1,238,000	\$1,238,000
Preferred Stock.....			"	3,099,200	3,099,200
				4,337,200	4,337,200
Total as per Balance Sheet				\$25,052,300	\$25,052,300

TABLE 7.—STATEMENT OF SECURITIES OWNED BY SOUTHERN RAILWAY CO. AND BY IT PLEDGED UNDER ITS FIRST CONSOLIDATED MORTGAGE DEED, AS OF JUNE 30, 1901.	
NAME OF SECURITY.	June 30, 1901.
U. S. Government bonds, 4½ per cent, 1907-1912, 1913-1917, 1918-1922, 1923-1927, 1928-1932, 1933-1937, 1938-1942, 1943-1947, 1948-1952, 1953-1957, 1958-1962, 1963-1967, 1968-1972, 1973-1977, 1978-1982, 1983-1987, 1988-1992, 1993-1997, 1998-2002, 2003-2007, 2008-2012, 2013-2017, 2018-2022, 2023-2027, 2028-2032, 2033-2037, 2038-2042, 2043-2047, 2048-2052, 2053-2057, 2058-2062, 2063-2067, 2068-2072, 2073-2077, 2078-2082, 2083-2087, 2088-2092, 2093-2097, 2098-2102, 2103-2107, 2108-2112, 2113-2117, 2118-2122, 2123-2127, 2128-2132, 2133-2137, 2138-2142, 2143-2147, 2148-2152, 2153-2157, 2158-2162, 2163-2167, 2168-2172, 2173-2177, 2178-2182, 2183-2187, 2188-2192, 2193-2197, 2198-2202, 2203-2207, 2208-2212, 2213-2217, 2218-2222, 2223-2227, 2228-2232, 2233-2237, 2238-2242, 2243-2247, 2248-2252, 2253-2257, 2258-2262, 2263-2267, 2268-2272, 2273-2277, 2278-2282, 2283-2287, 2288-2292, 2293-2297, 2298-2302, 2303-2307, 2308-2312, 2313-2317, 2318-2322, 2323-2327, 2328-2332, 2333-2337, 2338-2342, 2343-2347, 2348-2352, 2353-2357, 2358-2362, 2363-2367, 2368-2372, 2373-2377, 2378-2382, 2383-2387, 2388-2392, 2393-2397, 2398-2402, 2403-2407, 2408-2412, 2413-2417, 2418-2422, 2423-2427, 2428-2432, 2433-2437, 2438-2442, 2443-2447, 2448-2452, 2453-2457, 2458-2462, 2463-2467, 2468-2472, 2473-2477, 2478-2482, 2483-2487, 2488-2492, 2493-2497, 2498-2502, 2503-2507, 2508-2512, 2513-2517, 2518-2522, 2523-2527, 2528-2532, 2533-2537, 2538-2542, 2543-2547, 2548-2552, 2553-2557, 2558-2562, 2563-2567, 2568-2572, 2573-2577, 2578-2582, 2583-2587, 2588-2592, 2593-2597, 2598-2602, 2603-2607, 2608-2612, 2613-2617, 2618-2622, 2623-2627, 2628-2632, 2633-2637, 2638-2642, 2643-2647, 2648-2652, 2653-2657, 2658-2662, 2663-2667, 2668-2672, 2673-2677, 2678-2682, 2683-2687, 2688-2692, 2693-2697, 2698-2702, 2703-2707, 2708-2712, 2713-2717, 2718-2722, 2723-2727, 2728-2732, 2733-2737, 2738-2742, 2743-2747, 2748-2752, 2753-2757, 2758-2762, 2763-2767, 2768-2772, 2773-2777, 2778-2782, 2783-2787, 2788-2792, 2793-2797, 2798-2802, 2803-2807, 2808-2812, 2813-2817, 2818-2822, 2823-2827, 2828-2832, 2833-2837, 2838-2842, 2843-2847, 2848-2852, 2853-2857, 2858-2862, 2863-2867, 2868-2872, 2873-2877, 2878-2882, 2883-2887, 2888-2892, 2893-2897, 2898-2902, 2903-2907, 2908-2912, 2913-2917, 2918-2922, 2923-2927, 2928-2932, 2933-2937, 2938-2942, 2943-2947, 2948-2952, 2953-2957, 2958-2962, 2963-2967, 2968-2972, 2973-2977, 2978-2982, 2983-2987, 2988-2992, 2993-2997, 2998-3002, 3003-3007, 3008-3012, 3013-3017, 3018-3022, 3023-3027, 3028-3032, 3033-3037, 3038-3042, 3043-3047, 3048-3052, 3053-3057, 3058-3062, 3063-3067, 3068-3072, 3073-3077, 3078-3082, 3083-3087, 3088-3092, 3093-3097, 3098-3102, 3103-3107, 3108-3112, 3113-3117, 3118-3122, 3123-3127, 3128-3132, 3133-3137, 3138-3142, 3143-3147, 3148-3152, 3153-3157, 3158-3162, 3163-3167, 3168-3172, 3173-3177, 3178-3182, 3183-3187, 3188-3192, 3193-3197, 3198-3202, 3203-3207, 3208-3212, 3213-3217, 3218-3222, 3223-3227, 3228-3232, 3233-3237, 3238-3242, 3243-3247, 3248-3252, 3253-3257, 3258-3262, 3263-3267, 3268-3272, 3273-3277, 3278-3282, 3283-3287, 3288-3292, 3293-3297, 3298-3302, 3303-3307, 3308-3312, 3313-3317, 3318-3322, 3323-3327, 3328-3332, 3333-3337, 3338-3342, 3343-3347, 3348-3352, 3353-3357, 3358-3362, 3363-3367, 3368-3372, 3373-3377, 3378-3382, 3383-3387, 3388-3392, 3393-3397, 3398-3402, 3403-3407, 3408-3412, 3413-3417, 3418-3422, 3423-3427, 3428-3432, 3433-3437, 3438-3442, 3443-3447, 3448-3452, 3453-3457, 3458-3462, 3463-3467, 3468-3472, 3473-3477, 3478-3482, 3483-3487, 3488-3492, 3493-3497, 3498-3502, 3503-3507, 3508-3512, 3513-3517, 3518-3522, 3523-3527, 3528-3532, 3533-3537, 3538-3542, 3543-3547, 3548-3552, 3553-3557, 3558-3562, 3563-3567, 3568-3572, 3573-3577, 3578-3582, 3583-3587, 3588-3592, 3593-3597, 3598-3602, 3603-3607, 3608-3612, 3613-3617, 3618-3622, 3623-3627, 3628-3632, 3633-3637, 3638-3642, 3643-3647, 3648-3652, 3653-3657, 3658-3662, 3663-3667, 3668-3672, 3673-3677, 3678-3682, 3683-3687, 3688-3692, 3693-3697, 3698-3702, 3703-3	

NAME OF SECURITY.		June 30, 1901.
		Par value.
Railroad Bonds:		
Alabama Central R. R. Co., Income Bonds and Serip.....		\$1,353,275 00
Danville & Western Ry. Co., 1st Mtge. 5%		1,051,000 00
Elberton Air Line R. R. Co., 1st Mtge. 5%		150,000 00
High Point, R. R. & So. R. R. Co., 1st Mtge. 5%		402,000 00
North Carolina Midland R. R. Co., 1st Mtge. 6%		801,000 00
Piedmont R. R. Co., 1st Mtge. 6%		500,000 00
Piedmont R. R. Co., 2nd Mtge. 6%		500,000 00
Southern Ry. Co. in Kentucky, 1st Mtge. 5%		3,000,000 00
Southern Ry. Co. in Mississippi, 1st Mtge. 5%		200,000 00
Western North Carolina R. R. Co., 1st Mtge. 6%		1,325,000 00
Washington, Ohio & Western R. R. Co., 1st Mtge. 4%		225,000 00
Yadkin R. R. Co., 1st Mtge. 6%		615,000 00
Total Bonds.....		\$10,124,275 00
Railroad Stocks:		
Alabama Great Southern Ry. Co., Limited, Class "A"		\$1,725,000 00
Alabama Great Southern Ry. Co., Limited, Class "B"		4,540,050 00
Knoxville & Ohio R. R. Co.		1,111,000 00
Southern Ry. Co. in Kentucky.....		908,200 00
Total Stocks		\$8,374,250 00
Other Securities:		
Chesapeake Steamship Company, Certificate of Indebtedness.....		\$250,000 00
Chesapeake Steamship Company, Capital Stock.....		400,000 00
Total other Securities.....		\$650,000 00
Total Bonds, Stocks and other Securities.....		\$19,148,525 00
Book Valuation, as per Balance Sheet.....		\$13,548,927 40

TABLE 8.—STATEMENT OF "SECURITIES IN TREASURY UNPLEDGED," HELD FOR CONTROL OR AS MUNIMENTS OF TITLE, Etc., JUNE 30, 1901.

NAME OF SECURITY.		June 30, 1901.
RAILROAD BONDS.		Par Value.
Blue Ridge R. R. Co.	Mort. Loan 7%	\$497,000 00
Franklin & Pittsylvania R. R. Co.	1st Mort. 5%	74,500 00
Hartwell Ry. Co.	1st Mort. 5%	20,000 00
Lawrenceville Branch R. R. Co.	1st Mort. 5%	30,000 00
Greenville & Columbia R. R. Co.	1st Mort. 7%	15,000 00
Total Bonds.....		\$636,500 00
RAILROAD STOCKS.		
Alabama Great Southern Ry. Co., Limited—Class "B"		\$65,500 00
Atlantic & Yadkin Ry. Co.		1,000,000 00
Asheville & Spartanburg R. R. Co.		1,047,981 83
Augusta & Summerville R. R. Co.		50,000 00
Cincinnati, New Orleans & Texas Pacific Ry. Co.		400 00
Central Transfer, Railway & Storage Company		25,000 00
Danville & Western Ry. Co.		368,600 00
Danville, Mocksville & Southwestern R. R. Co.		50,200 00
Elberton Air Line R. R. Co.		90,250 00
Georgia Midland Ry. Co.		1,000,000 00
Hartwell Ry. Co.		20,000 00
High Point, Handleman, Asheboro & Southern R. R. Co.		212,500 00
Knoxville & Ohio R. R. Co.		7,000 00
Lawrenceville Branch R. R. Co.		475 00
Mobile & Birmingham R. R. Co.—Common		880,500 00
North Carolina Midland R. R. Co.		767,600 00
Northern Alabama Ry. Co.		46,900 00
Richmond & Mecklenburg R. R. Co.		300,000 00
South Carolina & Georgia R. R. Co.		\$21,300 00
Southern Ry. Co. in Kentucky		1,800 00
State University R. R. Co.		16,800 00
Spartanburg, Union & Columbia R. R. Co.		1,000,000 00
Southern Ry. Co. of Illinois		3,000 000 00
Yadkin R. R. Co.		462,750 00
Total Stocks.....		\$10,755,156 83
OTHER SECURITIES.		
East Tennessee Telegraph Co.	Stock	\$1,750 00
Southwestern Construction Co.	Stock	16,600 00
Miscellaneous		454,256 22
Total other Securities.....		\$472,606 22
Total, par value, Bonds, Stocks and other Securities.....		\$11,884,263 05
Book valuation, as per Balance Sheet		\$1,257,804 44

TABLE 10.—TRAFFIC STATISTICS, YEAR ENDED JUNE 30, 1901 AND 1900.
EXCLUDING ST. LOUIS DIVISION.

	1900-1901.	1899-1900.	Percentage of Increase or Decrease.
AVERAGE MILES OF ROAD OPERATED	6,424.94	6,364.88	Increase 0.94%
PASSENGER TRAFFIC:			
Number of passengers carried.....	7,437,404	6,728,003	Increase 10.53%
Number of passengers carried one mile....	370,424,293	330,572,117	Increase 12.06%
Average distance per passenger.	49.81	46.13	Increase 1.38%
Total revenue from passengers.....\$	8,616,563.96	\$ 7,765,102.47	Increase 10.97%
Average receipts per passenger per mile...	Cents 2.326	Cents 2.349	Decrease 0.98%
Total passenger-train earnings	\$ 10,066,974.71	\$ 9,900,280.53	Increase 1.70%
Passenger-train earnings per mile of road...	1,706.94	1,556.08	Increase 9.73%
Passenger-train earnings per train mile...	1.05501	1.00769	Increase 4.70%
Average number of passengers in each train	35.64	33.63	Increase 5.98%
Average number of passengers in each car	10.61	10.25	Increase 3.51%
FREIGHT TRAFFIC:			
"REVENUE" FREIGHT ONLY.			
Number of tons carried	14,121,181	13,674,044	Increase 3.27%
Number of tons carried one mile.....	2,344,053,449	2,290,320,252	Increase 1.95%
Average distance hauled per ton	166.00	168.15	Decrease 1.28%
Total freight-train earnings	\$ 22,205,533.82	\$ 21,005,426.27	Increase 5.26%
Average receipts per ton per mile.....	Cents .947	Cents .917	Increase 3.27%
Freight train earnings per mile of road...	3,456.14	3,314.35	Increase 4.28%
Freight-train earnings per train mile.....	1.81573	1.61559	Increase 12.39%
Average number of tons of freight in each train	191.67	176.09	Increase 8.85%
Average number of tons of freight in each loaded car	12.95	12.72	Increase 1.81%
ALL FREIGHT, including Company's material hauled free.			
Number of tons carried	16,245,876	15,575,715	Increase 4.30%
Number of tons carried one mile	2,732,279,318	2,646,333,650	Increase 3.25%
Average number of tons of freight in each train.....	223.42	202.67	Increase 10.24%
Average number of tons of freight in each loaded car	15.09	14.64	Increase 3.07%
EARNINGS AND EXPENSES:			
Passenger and freight-train earnings	\$ 33,172,508.53	\$ 30,989,706.80	Increase 7.01%
Passenger and freight-train earnings per mile of road	\$ 5,163.08	\$ 4,870.43	Increase 6.01%
Gross earnings.....	\$ 33,007,581.85	\$ 31,388,014.86	Increase 5.07%
Gross earnings per mile of road	\$ 5,230.80	\$ 4,931.44	Increase 6.07%
Gross earnings per revenue train mile ...	\$ 1.48544	\$ 1.37149	Increase 8.31%
Operating expenses and taxes	\$ 23,477,531.60	\$ 21,971,633.27	Increase 6.83%
Operating expenses and taxes per mile of road	3,634.13	3,432.01	Increase 5.83%
Operating expenses and taxes per revenue train mile	\$ 1.03770	\$.98004	Increase 8.03%
Net earnings.....	\$ 10,130,030.19	\$ 9,416,381.59	Increase 7.58%
Net earnings per mile of road	\$ 1,576.67	\$ 1,479.43	Increase 6.57%
Net earnings per revenue train mile.....	\$.44774	\$.41145	Increase 8.82%

For purposes of comparison, the figures given for the year ended June 30, 1900, include the operations of substantially all properties as operated by the Southern Railway Company in the year ended June 30, 1901, except the St. Louis Division, which was operated only six months of the year.

**Reduced Rates to Louisville via Penn
sylvania Railroad, Account Trien
nial Conclave, Knights Templar.**

On account of the Triennial Conclave of the Knights Templar, to be held in Louisville, Ky., August 27 to 31, the Pennsylvania Railroad Co. will sell excursion tickets from August 22 to 25, inclusive, to Louisville and return at rate of one first-class fare for the round trip. These tickets will be good to return until September 2, inclusive, but if ticket is deposited by the original purchaser with joint agent at Louisville not earlier than August 28 nor later than September 2, and a fee of fifty cents is paid at the time of deposit, an extension of the return limit may be had until September 16. †

**Reduced Rates to Cleveland via Penn-
sylvania Railroad, Account
G. A. R. Encampment**

On account of the Thirty-fifth Annual Encampment of the Grand Army of the Republic, to be held at Cleveland, Ohio, September 10 to 14, inclusive, the Pennsylvania Railroad Co. will sell excursion tickets to Cleveland from stations on its line at greatly reduced rates.

Tickets will be sold and good going September 8 to 12, inclusive; good to return until September 15, inclusive; but by depositing ticket with joint agent at Cleveland prior to noon of September 15, and the payment of fifty cents, return limit may be extended to October 8, inclusive.

For specific rates and further information apply to ticket agents. †

TRADE LITERATURE.

Enlarged Its Plant.—The Chicago House Wrecking Co., West Thirty-fifth street, Chicago, Ill., has been compelled to add a plant to its establishment which is devoted entirely to rebuilding boilers and gasoline engines. The company has at present in stock a large quantity of horizontal tubular boilers in excellent condition. It has also recently published a catalogue for hardware trade which should be in the hands of every hardware dealer.

Empire Air Tools.—The latest catalogue issued by the Empire Engine & Motor Co. deals especially with air tools, which this company manufactures. They include pneumatic motors, chain hoists, drills, reamers, crane motors, hoisting engines, etc. The mechanism is adapted to a wide variety of uses, and the illustrations show that it is extremely compact. The catalogue also contains an illustration of the company's works at Orangeburg, N. Y.

Very Elaborate.—The description of the furnaces designed and built by the Rockwell Engineering Co., 26 Cortlandt street, New York, may well be considered elaborate, as it requires a large catalogue to contain it. The illustrations of the annealing and hardening furnaces, heating furnaces, forges, melting furnaces, brazing furnaces and other apparatus manufactured by this company are in color, and of a high order. The work is devoted to the illustrations, which explain themselves.

"Standard Candle-Power of Incandescent Lamps."—Such is the title of a little pamphlet issued for the information of users of incandescent lamps. The publication's contents comprise the report of the committee of the National Electric Light Association on Standardization of Incandescent Lamps, together with some additional remarks pertaining thereto not authorized by the committee. The Shelby Electric Co. of Shelby, Ohio, issued the pamphlet; New York, Boston, Chicago and San Francisco offices.

Valuable Bluebook.—This title can properly be given the latest catalogue issued by the F. C. Austin Manufacturing Co. of Harvey, Ill. The catalogue describes the noted Austin gyratory crushers, as well as other equipment for which the company is noted. Some of its specialties include wagon loaders and ditchers, dump carts, elevators and screens, street and road machinery, well-making machinery, plows and tools for handling earth of all kinds. The company has many testimonials, which show the high regard in which its products are held.

Handy for the Vestpocket.—A booklet recently issued by Messrs. Warren Webster & Co. of Camden, N. J., is so compact that it can be readily carried in the vestpocket, but contains much valuable information about which the company calls "a good thing"—the Webster Feed-Water Heater. Many others have the same opinion as the manufacturers, on account of the large number of the heaters now in use. At present nearly 1,000,000 horse-power is represented in these heaters, which are in service not only in this country, but in nearly every part of the world.

Increasing in Favor.—Jute rope for drives and other transmission purposes is rapidly increasing in favor, judging by the many orders which are being received for it by the American Manufacturing Co., 63 and 65 Wall street, New York. It is especially appreciated in the South, where it is being purchased in carload lots. Some of the advantages of the jute are its cheapness and durability. Detailed information is given in a pamphlet, which the American Manufacturing Co. will be glad to send to all inquirers. It is entitled "A Little Bluebook on Rope Transmission."

Mechanical Muscle.—"Digging Machinery" is the title of the catalogue recently issued by the Hayward Company, 97 Cedar street, New York, but the book not only contains information relative to digging and dredging apparatus, but also steam shovels, transferring equipment and other forms of apparatus. A feature of the work is the large number of photographs showing the Hayward machinery in use in loading vessels and cars, constructing railroads, dredging and removing material from sewer and other excavations. The illustrations are notable for their clearness, and are extremely interesting, as they show the apparatus actually at work.

Very Attractive.—The title page of the pamphlet recently issued by the Hazard Manufacturing Co. of Wilkesbarre, Pa., is devoted to the Pan-American Exposition, and is ex-

tremely attractive from an artistic standpoint. It is designed in colors, and very appropriate to the description, which is contained in the pamphlet. Incidentally it may be said that the exhibit of wire, cable and other specialties manufactured by this company has attracted much attention at Buffalo from experts, who recognize the superiority of the product manufactured at Wilkesbarre. Since 1848 the Hazard Company has been engaged in the manufacture of wire rope in various forms, and is now equipped with all of the facilities for producing insulated wire and cable for electrical purposes of the highest grade.

Strength.—A description recently published by the Newhall Chain, Forge & Iron Co., Havemeyer Building, New York, is notable for the variety of photographs of heavy chain which it manufactures. The company has an international reputation for manufacturing chain for hoisting, hauling, and especially for marine purposes. As recently noted in these columns, it has secured a contract to "construct" the anchor chains for the steamships built for the Great Northern Railway Co., which are the largest chain cables yet designed. The company stakes its reputation upon its "Warwick" chains for dredging, mining, shoveling and hoisting. The metal is rolled especially for the purpose at its mills, and represents a combination especially adapted for strength and durability. Every piece of chain before leaving the works is thoroughly tested.

Reliable Fire Apparatus.—The Boston Manufacturers' Mutual Fire Insurance Co. in a recent circular specifies different varieties of fire apparatus which it considers the most effective and reliable. The names of a number of prominent manufacturers are given in the list. The Stillwell-Bierce & Smith-Valle Co. of Dayton, Ohio, also the Laidlaw-Dunn-Gordon Company of Cincinnati, Ohio, are mentioned in connection with the Underwriter fire pump. The Chapman Valve Co., the Ludlow Valve Co., both of Boston, also Messrs. R. D. Wood & Co. of Philadelphia, are mentioned as makers of hydrants. Reliable brands of hose are manufactured by the following companies: Boston Belting Co., the Eureka Fire Hose Co., New York, New Jersey Car Spring & Rubber Co. of Jersey City. The Utica Portable Fire Extinguisher offered the trade by the O. J. Childs Co. of Utica, N. Y., is also recommended by the company, as well as the underwriter play pipe manufactured by the New York Coupling & Supply Co.

Modern Cotton Baling.—The improved systems of cotton baling made public within the last few years include one which has achieved a reputation wherever cotton is handled. It is hardly necessary to refer to the success attending the use of the Lowry Bale, introduced by the Planters' Compress Co. of Boston. In a bulletin recently issued by this company the output of Lowry bales during 1900 was given as double that of the preceding year, which is an indication of its popularity. To give an idea of the density attained by this process, one train of twenty-one carloads was shipped in 1900 from East St. Louis to Boston. It contained 4700 bales, weighing 1,145,000 pounds. A shipment of square bales to the same port representing thirty carloads contained but fifty bales to a car, or a total trainload of 750,000 pounds, thus showing the space saved by the use of the Lowry bale. The pamphlet referred to is excellently illustrated with views showing the method of handling these bales at railroad stations and seaports. It also contains much statistical information of general value to cotton users.

Quality and Utility.—The town of Goshen, Ind., is as famous for its manufactured products as was the Land of Goshen of the ancients for other things. It is largely due to the fact that the Kelly Foundry & Machine Co. is located in the town referred to. In the line of steel tanks, agricultural machinery and other implements the company has a reputation which is excelled by none in the United States. A recent catalogue gives an idea of the remarkable extent of its wares, which include not only tanks, but tank heaters, hog scalders, mail delivery boxes, feed boxes, ash covers, lawn swings, ladders, cabinets, feed cookers, stock fountains, lawn furniture, tank pumps, steel baskets, floats and valves. The noted Goshen and Tiger Steel Tanks are also manufactured at this plant, as well as a full line of pipe and pipe fittings. All of the Kelly goods are manufactured of the very best material, and have a reputation for their superior workmanship. They are put together to hold, and they do hold. The catalogue illustrates nearly all of the principal specialties, and contains statistics of dimensions and prices which are very valuable.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

New Corporations.

Floyd Day and others have organized a bank at Beattyville, Ky. It will begin business September 2.

A charter has been granted the bank at Maben, Miss., with \$8000 capital stock. A. H. Thomas is one of the directors.

J. S. Eggleston and others have organized the People's Insurance Co. at Lexington, Miss., with \$10,000 capital stock.

The bank recently formed at Grantville, Ga., is capitalized at \$25,000. Among those interested in it are J. W. Colley and A. Post.

The Mutual Reserve & Investment Co. has been organized at Greensboro, N. C., by C. U. McAdoo and others, with \$100,000 capital stock.

The Bank of Green Forest, recently organized at Green Forest, Ark., has opened for business with W. R. Sneed, president, and J. O. Mitchell, cashier.

A. M. Wing has been elected president, and B. H. Warren, cashier, of the national bank recently organized at Jackson, Miss. It is capitalized at \$25,000.

The Georgia Title Guaranty & Trust Co. has been organized at Macon, Ga., with \$250,000 capital stock, to do a general trust and bonding business. Among those interested are I. B. English and T. B. West.

New Securities.

Local banks have purchased the issue of \$25,000 in 4 per cent. bonds of Albany, Ga., at par. The bonds are issued for improvements.

The stockholders of the Citizens' National Bank of Baltimore have approved the increase in its capital from \$500,000 to \$1,000,000.

It is stated that the town of Tryon, N. C., is considering the question of issuing bonds for improvements. The town clerk will give further particulars.

It is announced that an issue of \$30,000 in 4 per cent. improvement bonds is offered for sale by the town of Wethersford, Texas. J. T. Cotten may be addressed.

The parish of Eastern Carroll, Louisiana, will vote September 10 to decide an issue of \$16,500 in improvement bonds. The police jury may be addressed at Lake Providence, La.

The issue of \$19,000 in 4 per cent. refunding bonds in the town of Buckhannon, W. Va., remains unsold, and it is announced that bids will be received until October 4. The town clerk may be addressed.

It is probable that the city of Atlanta will endeavor to refund an issue of \$418,000 in bonds falling due on January 1. The new issue will bear 3½ per cent. interest if floated. The mayor may be addressed.

The Manufacturers' Record is officially informed that the city of Newport News, Va., has voted in favor of issuing \$125,000 in improvement bonds, and that they will probably be placed on the market in September. A. B. Moss is mayor.

Milburn Designs.—Milburn designs for buildings of various kinds are now recognized not only in the South, but throughout the United States, as of a very high standard. In a recent book published by Mr. Frank P. Milburn of Charlotte, N. C., and Columbia, S. C., an idea is given of the extent and elaborate character of the structures he has planned in the South, which include depots, as well as churches, public

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buildings, banks and private residences. The illustrations in the book are of a remarkably high order, the majority being reproduced from photographs. Mr. Milburn is the official architect of the Southern Railway Co., and enjoys an enviable patronage.

An Interesting History.—The history of the development of the briquetting press is really a triumph of evolution, and the catalogue recently issued by the Henry S. Mould Company of Pittsburg has this very appropriate title. Mr. B. C. White, the inventor of the press in question, gives a very interesting history of its development, with drawings which illustrate the various designs. They include the White Mineral Press, the White Belgian Press, the Briquetting Press and the Eggette Machine. The Mould Company is prepared to furnish complete plans of machinery for putting into solid block form any fine material.

Working Under Water.—The apparatus invented by Mr. Lindon W. Bates of Chicago, Ill., for channel excavating, ice breaking and other marine work has become known the world over. Utilized upon the Mississippi river in 1894, the remarkable results of the Bates dredge attracted the attention of the Russian, Belgian and other governments, and apparatus designed by Mr. Bates is now being used in harbor and other work in Australia, India and other countries, as well as Belgium and Russia. A recent catalogue gives illustrations of some of the principal apparatus designed for this purpose, as well as a complete description, making it extremely valuable to engineers and others interested in harbor improvements.

Managers of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the Manufacturers' Record. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

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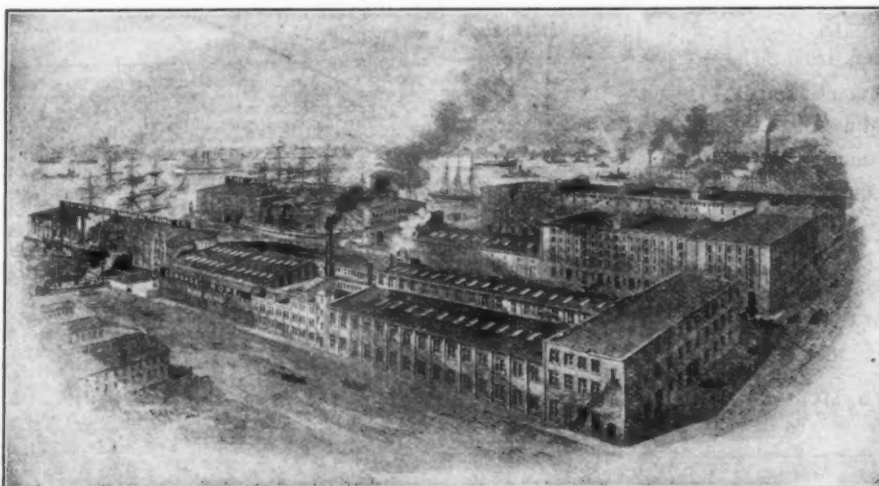
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STOCKHOLDERS' COMMITTEE
OF
The American Cotton Oil Co.

To the Holders of Preferred and Common Stock of the American Cotton Oil Co.:

Holders, to a large amount, of Preferred and Common Stock of the American Cotton Oil Co. have entered into a Stockholders' Agreement (dated July 22, 1901, and lodged with the Depository) for the purpose of furthering a consolidation or other disposition of property of, or the acquisition or lease of property by, the American Cotton Oil Co., and for the advancement of the interests of depositing stockholders through united action, whereby their respective holdings shall be held and managed in bulk during the period of the Agreement, and better results be secured than by individual action.

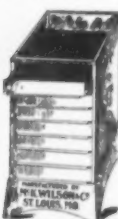
The undersigned have consented to act as a Committee under said Agreement, and hereby afford holders of the Preferred and Common Stock of the American Cotton Oil Co. the opportunity of participating in the benefits of said Agreement by thereunder depositing their stock with the First National Bank of the City of New York, as Depository, on or before the 30th day of September, 1901.

Negotiable Certificates of Deposit will be issued for the deposited stock. Copies of the said Stockholders' Agreement may be obtained from the Secretary of the Committee.

Dated New York, August 1, 1901.

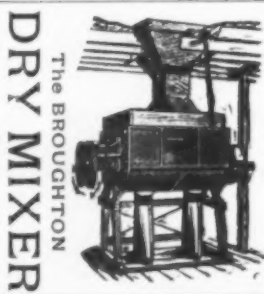
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PROPOSALS.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., August 19th, 1901. Sealed Proposals will be received at this office until 2 o'clock p. m., on the 10th day of September, 1901, and then opened, for the installation of an ash-handling apparatus for the U. S. Custom House and Post Office at St. Louis, Mo., in accordance with drawings and specification, copies of which may be obtained at this office or at the office of the Custodian, St. Louis, Mo., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR**, Supervising Architect.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., August 20, 1901.—Sealed Proposals will be received at this office until 2 o'clock P. M. on the 5th day of September, 1901, and then opened, for a Heating Apparatus for the Surgeon's Quarters at the U. S. Quarantine Station, Reedy Island, Delaware, in accordance with drawing and specification, copies of which will be furnished, at the discretion of the Supervising Architect, upon application to this office. **JAMES KNOX TAYLOR**, Supervising Architect.

BIDS FOR NEW COURTHOUSE.

Bids for the new Courthouse at Cartersville, Georgia, are wanted on September 17th, 1901, to be handed to L. B. Matthews, Chairman Board of County Commissioners, Bartow County, Georgia. Plans can be seen at the office of L. B. Matthews, Cartersville, Georgia; Kenneth McDonald & J. F. Shebley, Architects, of Louisville, Ky., and J. W. Golucke & Co., Architects, Atlanta, Ga. For further information apply to either of the above named persons. **L. B. MATTHEWS**, Chairman.

Power House Equipment.

Bids for the Power House and Sub-Station equipments, amounting to about 3000 K. W. capacity, consisting of Engines, Generators, Boilers, Piping, Transformers, Rotaries, Switchboards, etc., for the Pittsburgh, McKeesport & Connellsville Railway Company, are requested.

Plans and specifications may be obtained by request at the office of Westinghouse, Church, Kerr & Company, Engineers, No. 26 Cortlandt Street, New York, on and after August 15th, 1901.

Bids must be addressed to M. R. McAdoo, General Manager, and must be submitted before noon on Wednesday, September 4th, 1901, at the office of the Railway Company, Room No. 1001, Bank for Savings Building, Pittsburgh, Pa.

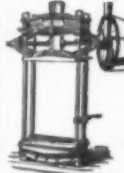
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Southern Timber and Mineral Lands.
Industrial Properties & Investments.
Corporations Organized and Financed.

Hotel Emery, Cincinnati, O

SOUTHERN INVESTMENTS.

Additional Capital Supplied.
Stock Companies Organized and Attractive Properties Financed.
Make a Specialty of Mining, Timber and Industrial Propositions.

Bank references furnished.

R. E. WATSON, Austell Building, ATLANTA, GA.

FOR SALE.

BOILER WORKS,
fully equipped with all modern machinery. Business established. Location perfect. Good reasons for selling out at once.
Only those meaning business need apply.

LEE BROTHERS,
MEMPHIS, TENN.

The manufacturers of a line of

Modern Machine TOOLS

wish to establish a new factory large enough to take care of their rapidly increasing trade in a city from ten to seventy-five thousand inhabitants. Two hundred and fifty men can be employed, nearly all high-grade mechanics. Correspondence invited. Address XX, Manufacturers' Record.

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COAL

At Wholesale and Retail.

CARGO AND BUNKER COAL Furnished Promptly.
MOBILE, ALABAMA.

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Lowest list prices and best discounts allowed wholesalers on window glass in car lots delivered here. **CONCUH PINE LUMBER & MFG. CO.,**
MONTGOMERY, ALA.

If You Want to Buy TOOLS,

MACHINERY,

MILL SUPPLIES,

Anything used by a manufacturer, builder, miner or contractor, notify the

MANUFACTURERS' RECORD.

Baltimore, Md., and your wants will be placed before hundreds of manufacturers who will send you their catalogues and prices. It costs you nothing.

Towns Wanting Factories.

Would

POWER

At a fuel cost of

\$5.00 Per Year

per ten-hour horse-power, be any attraction to you?

Wheeling, West Va.

can do even better than that. For particulars, ask the

Wheeling Board of Trade,

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Cotton Mill Centre!

"Cedartown, Ga."

Another \$100,000 Cotton Mill is announced for establishment at "CEDARTOWN, GA." This town is rapidly growing as a Textile Centre and new plants are constantly being built here. The product of the latest mill will be fine numbers of hosiery yarn.

Cotton and
Knitting Mills,
Stove Works, Machine Shops, Basket Factories, Agricultural Implement Works, Stores, Etc., Etc., are offered unexcelled opportunities.

"Cedartown, Ga."

has Water Works, Electric Light Plant and Underground Sewerage, Churches of all denominations and good Public Schools. For information, write

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Woodworking PLANTS WANTED

At a number of points in the South along
the line of the

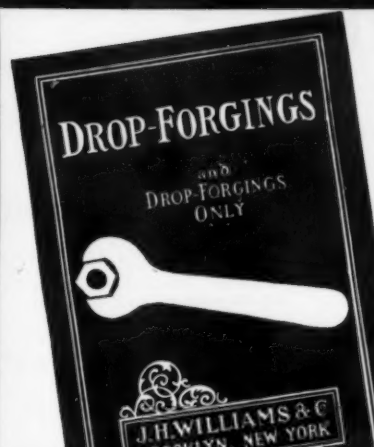
Southern Railway.

There are good openings for Woodworking Plants, such as FURNITURE FACTORIES, PLANING MILLS, SPOKE AND HANDLE FACTORIES, or other plants using pine or hardwoods. Local people will invest from \$6,000 to \$8,000 with an experienced man who will himself invest a like amount or more and do a legitimate business. For information write to

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Land & Industrial Agent, Washington, D. C.
SOUTHERN RAILWAY.

TO Real Estate Agents:

Do you own a farm? The question is pertinent because a great many Real Estate Agents even in the cities, and more largely of course in the towns, are owners of farm property. In many cases it is an incumbrance instead of a profitable asset. Or even if it yields a revenue this might be made larger. If you have any such interest as this in farming, stock raising, fruit growing, or any agricultural pursuit, don't you think you might find some valuable and helpful suggestions and ideas in a high-class periodical of Southern agriculture, such as the Southern Farm Magazine? It is only a dollar a year. Don't you want it? Published by Manufacturers' Record Publishing Co., Baltimore.



BY far the most important book we ever have made is ready; sixteen lines of new tools and parts and thirteen additions to established ones. It has "business" value. Call it "Wrench Book G"

J. H. Williams & Co
BROOKLYN, N. Y.

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EMERY WHEELS

May have faults, but present users—and they are legion—have not found them.

NEITHER WILL YOU. A Trial is all we ask.

The Abrasive Material Co.
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"Abrasive"

Emery Wheels **CORUNDUM WHEELS.**
Will Run Wet or Dry. Polishers and Machinists' Supplies, Rub Stones, Emery Wheel Machinery, and Diamond Tools.
Vitrified Wheel Co., Westfield, Mass.

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in Reams and Rolls.

Flint Paper,
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HAIR FELTING
for covering Boilers, Steam and
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Refrigerators.

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GLUE, CURLED HAIR and SAND PAPER.
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Advertisements under this head will be inserted at the rate of one cent a word for each insertion.

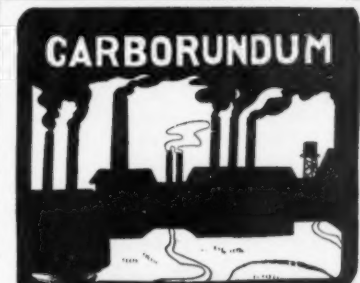
WANTED.—A Superintendent for our Rock Salt Mines at Weeks Island, La. Must be familiar with rock salt business and capable of designing a rock salt mill. Write, giving reference and state experience. MYLES SALT CO., Ltd., New Orleans, La.

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WANTED.—By overseer of weaving, plain or fancy. Experienced designer. Address OVERSEER, care Mfrs. Record.

ANALYTICAL CHEMIST AND ASSAYER of wide experience in engineering, chemistry and assaying, is open for position. Address ASSAY, care Mfrs. Record.



Five Years Ago

Carborundum wheels for general machine shop use were first put on the market—Today they are used in almost every large machine shop in the country—There's a reason for it—a new product doesn't make progress like that by chance.

Write for the Carborundum booklet telling all about it.
The Carborundum Company,
Niagara Falls, N. Y.



If you are thinking of enlarging your mill, factory or mine, or of purchasing machinery of any kind, send the Manufacturers' Record a postal card giving the character of the machinery needed.

Bargains in Machinery FOR IMMEDIATE DELIVERY.

Woodworking Machines

- 1 26" Woods Double Surfer.
- 1 7" four-side Moulder.
- 1 Houston Upright Mortiser.
- 1 Colladay Jig Saw.
- 1 Single Spindle Shapers.
- 2 Wood Lathes.
- 4 Saw Tables, rip and cross cut.
- 1 Hand Matcher.

ATTRACTIVE PRICES.

THOMAS P. CONARD,
119 S. Fourth St. PHILADELPHIA, PA.

FOR SALE.

SECOND-HAND WOOD-WORKING MACHINERY.

- 14" Keystone Matcher.
- 14" Preble Matcher.
- 24x6 Weatherby, Rug & Richardson; 24x6 Hoyt Bros.; 8" S. A. Wood Fast Feed Matcher.
- 27x12 Endless Bed Surfer, S. A. Woods.
- 24x6 J. A. Fay Incline Bed Cabinet.
- 12" Inside Woods Moulder.
- 10, 8, 6 and 4" Outside Moulders, all makes.
- Greenlee Self Feed Saw, Saw Tables.
- 38 Rawley & Hermance Re-saw.
- 24 H. B. Smith Re-saw.
- Tenoners, Pony Planers, Mortisers, Jig Saws, Sanders, Gasoline Engines, Fans, Jointers, Lathes.
- Blue prints of all machines will be sent upon application. Write and get our prices before buying.

PRICE LISTING.

507 Great Northern Bldg. CHICAGO, ILL.

STRUCTURAL IRON WORK

For Immediate Delivery.

EYE BEAMS, from 3 in. to 20 in.
CHANNELS, from 1 1/2 in. to 15 in.
ANGLES, 1 in. to 6 in.
FLATS & BARS up to 20 in. wide.
ROOF TRUSSES, GIRDERS, COLUMNS,
and **BRIDGES** designed and built.
Bridge Railings a Specialty.

BELMONT IRON WORKS
PHILADELPHIA, PA.

SECOND HAND Electrical Machinery

BOUGHT AND SOLD.

Correspondence solicited.

THOMPSON, SON & CO.

107 Liberty Street, NEW YORK.

High Speed Engine Bargains

No.	H. P.	Maker	Cylinders
1	200	Buckeye	16 1/2 x 27
1	90	Atlas C.	14 x 20
1	75	Westinghouse	12 x 11
1	65	Beck-Taylor	10 1/2 x 12
1	60	Ball	10 x 12
1	40	A. & S.	8 1/2 x 12
1	30	Atlas C.	9 x 14

CAMP ENGINEERING CO., 47 W. Lake St., Chicago, Ill.

SECOND-HAND.

We have a number of Dynamos and Motors, which we have displaced with larger units. These are all overhauled and guaranteed to be in good working order before shipping. The prices are very moderate indeed.

Your correspondence is solicited.

THE W. C. BENBOW CO.

Manufacturers' Agent. COLUMBUS, OHIO.

FOR SALE.

Second-hand Corliss Engines,

100, 150, 200, 350, 500 and 800 H. P. Boilers, all sizes. Steam Pumps in great variety. Send for bargain list of second-hand machinery.

S. L. HOLT & CO.

67 Sudbury Street, BOSTON, MASS.

FOR QUICK SALE.

A nine-inch four-side Horizontal Moulder, in good running condition. Will be sold at a reduction before removal. Address

L. F. SEYFERT'S SONS,

437-441 N. Third St., PHILADELPHIA, PA.

FOR SALE.

3 80-horse power Return Tubular Boilers in good condition.

W. R. McCARE, West Norfolk, Va.

SECOND-HAND DYNAMOS AND MOTORS EXCLUSIVELY

Largest Stock in the World.

Send for our Monthly Bargain Sheet, with lowest net cash prices on machines in stock—Everything Fully Guaranteed. Capital, \$100,000.00 Paid up.

GREGORY ELECTRIC CO.

54, 56, 58, 60, 62 S. Clinton St., CHICAGO.

Second-hand Machinery.

LATHES.

- 12 and 20" triple-gear pit, A1.
- 36x14 Wilmarth, triple-gear.
- 60x20 Wilmarth, triple-gear.
- 46-64x30 Wilmarth, double head.
- 48x14 Fitchburg.
- 36x18 Betts, double-gear compound.
- 32x10 Draper, compound, A1.
- 30x23 D. W. Pond, C. R. & P. C. F., A1.
- 30x10 Draper, C. R. & P. C. F.
- 27x12 Draper, C. R. & P. C. F.
- 27x8 ditto.
- 26x12 Wright, C. R. & chuck.
- 23x8 Putnam, R. & F.
- 20x10 Cincinnati, C. R., A1.
- 20x7 Draper, C. R. & P. C. F.
- 19x11 Lodge & Davis, C. R. and taper.
- 18x8 Draper, C. R. & P. C. F.
- 17x8 Prentiss, C. R. & P. C. F.
- 14x6 Le Blond, plain turning.
- 14x6 Prentiss, R. & F.

Also large assortment of fox monitors, speed and current lathes.

PLANERS.

- 61x64x23 Hepworth.
- 41x25x16 Whitcomb.
- 48x36x12 New Haven.
- 24x24x6 Flather.
- 24x24x8 Pratt & Whitney.
- 18x16x36 Putnam.

MISCELLANEOUS.

- 50x12 Nicholson & Waterman horizontal boring machine, fine.
- 60" Pond vert. boring and turning mill.
- 48" Bickford ditto, fine.
- 100-lb. Niles steam hammer.
- 1400 and 1700-lb. Merrill drop hammers, fine.
- 400, 800, 1000 and 2200-lb. ditto.
- Reamers & Smith vert. spindle milling mach.
- No. 6 Brainard Lincoln type miller.
- No. 15 Garvin plain miller, B. G.
- No. 1 Brown & Sharpe univer., without arm.
- No. 23 Brown & Sharpe plain, 49" table feed.
- 2 No. 2 Becker vert. millers, with rotaries.
- 11" Lowell slotter.
- 40" Michel sliding head power feed drill, B. G. P. F.
- 25" Gould & Eberhardt ditto, fine.
- 69" Keystone radial.
- 23" South Bend drill, B. G. & P. F., fine.
- 14" Prentiss crank shaper, A1.
- 28" Smith & Mills crank.
- 28" Smith & Mills shifting belt.
- No. 2 and No. 3 Landis univ. grinders.
- 27x18 Springfield surface grinder.
- Nos. 0, 1 & 2 P. & W. screw machs., wire feed.
- No. 1 Colburn keyseater.
- Ideal twist drill grinder.
- 19" Swamscot plate planer.
- 8" power bending rolls.

Also large assortment of other tools. Send for second-hand list.

PRENTISS TOOL & SUPPLY CO.,

115 Liberty St., New York, N. Y.
Buffalo Office, Block 35 Machinery Hall,
Pan-American Exposition.
Boston Office, 200 Franklin St.

Good Second-Hand Machinery.

- One 14x12 Harris Corliss Engine.
- One 23x18 Corliss Engine, Geo. Corliss make.
- One 14x28 Naylor Corliss Engine.
- One 10x20 Horizontal Engine, link motion.
- Three 44-in. Tolhurst Belt Whizzers.
- One 40-in. Tolhurst Whizzer with Engine, new.
- Two 42 in. Dieneit & Eisenhardt Whizzers, with Engines
- 20, 26, 30-in. Belt Whizzers.
- One 36-in. Weston Belt Whizzer, nearly new.
- Large Lot Lathes, Drill Presses, Pumps, Power-Presses, Drop-Presses, Foot-Presses, Evans' Screw-Press, Wood-Working Machinery.

J. NUTTALL,

1723 N. 5th Street, PHILADELPHIA, Pa.

Largest Assortment. Immediate Delivery.

Send for Catalogue.

- 1 30"x60" Greene Engine.
- 1 26"x48" Hamilton left-hand Corliss Engine.
- 1 26"x48" Greene Engine.
- 1 16 1/2"x32"x36" Fitchburg Cross Compound.
- 1 14"-28"x28" Cross Compound Fitchburg.
- 1 13"-20"x16" McEwan Tandem Comp. Engine.
- 1 17"x30" Williams Automatic Engines.
- 1 16"x24" Beck Automatic Engine.
- 1 15 1/2"x15" Armstrong & Sims Engines.
- 1 15"x30" Buckeye Automatic Engine.
- 1 14"x15" Ideal Engine.
- 1 12"x12" Armstrong & Sims Engine.
- 1 10"-18"x12" Ball Tandem Compound Engine.
- 14 Water Tube Boilers, 165 to 200 lbs. steam pres.
- 22 Horizontal Tubular Boilers.
- Several full Railway Equipments.
- Large stock of Machine Tools. Let me know your wants.

FRANK TOOMEY,

127-131 N. Third Street, PHILADELPHIA, PA.
Long Distance Telephone 261-262.

FOR SALE.

- 2 Band Saw Mills, 1 Brick Plant, 1 Endless Rope Mine Hoisting Plant, 4 2-ton Shay Geared Locomotives, 18 standard gauge Flat Cars, Boilers, Engines, Rail and Equipment.
- WANTED—Relay Rail, Second-Hand Equipment, Locomotives, Cars, Etc.

THE MILLER SUPPLY CO.,

Huntington, W. Va.

STEAM ENGINES.

- 1 20" and 36"x48" Tandem Hamilton Corliss, wheel 22"x56" face.
- 1 36x72 Wheelock.
- 1 39x72 Wheelock.
- 1 30x60 Harris Corliss right and left hand wheels, 38" face by 20 ft. diameter.
- 1 24"x48" Bates Corliss.
- 1 20"x48" Geo. H. Corliss.
- 1 10"x24" Harris Corliss.
- 1 16 1/2 in. x25 in. x15 in. cross compound Armstrong & Sims.
- 1 16 in. and 27 in. x16 in. Westinghouse compound.
- 1 13"x12" Erie Ball.
- 1 12"x12" Ball automatic.
- 1 13 in. x14 in. Watertown automatic.
- 1 14 in. x13 in. Armstrong & Sims automatic.
- 1 15 1/2 in. x16 in. New York safety automatic.
- 1 15 1/2 in. x15 in. Armstrong & Sims automatic.
- 1 16 in. x16 in. Ball automatic.
- 1 18 1/2 x18 in. Ideal automatic.

BOILERS.

- 2 375 H. P. Sterling water tubes for 150 lbs.
- 2 200 H. P. National water tubes for 125 lbs.
- 2 175 H. P. Sterling water tubes.
- 3 66"x16" Return Tubulars.
- 2 500 H. P. Hazelton boilers.

CONDENSERS.

- 1 600 H. P. Snow condenser.
- 3 325 H. P. Davidson condensers.

Railway Generators.

- 4 300 K. W. M. P. 4, General Electric.
- 3 100 K. W. M. P. 4, General Electric.
- 2 111 K. W. M. P. 4, Westinghouse.
- 4 60 K. W. Edison bi-polar.

MOTORS.

110, 220, 500-volt motors, from 1 H. P. to 200 H. P.

ALSO

ALTERNATORS,
ARC DYNAMOS,
LAMPS, STREET-CAR, ETC.

ROSSITER, MacGOVERN & CO.

Electrical and Steam Machinery,

141 Broadway, N. Y. Factory, Jersey City, N. J.

SEND FOR NEW CATALOG.

Second-Hand Machinery.

- 3 13x5 Blaisdell lathes, elevating rest.
- 6 13x6 Blaisdell lathes, elevating rest.
- 2 14x5 Bradford lathes, plain rest.
- 3 14x6 Flather lathes, elevating rest.
- 2 14x6 Ames lathes, elevating rest.
- 10 15x6 Blaisdell lathes, elevating rest.
- 2 15x6 Prentice lathes, compound rest.
- 1 20x8 Putnam lathe, compound rest.
- 1 22x9 New Haven lathe, compound rest.
- 1 22x22x5 Fitchburg planer.
- 1 30x30x10 Putnam planer.
- 1 36x36x10 Wilson planer, two heads.
- 1 36x36x16 Hughes & Phillips planer.
- 3 15" Smith & Mills shapers.
- 1 26" Lodge & Davis shaper.
- 8 20" Barnes Rd. base, power-feed drills.
- 7 22" Barnes back-gear power-feed drills.
- 2 25" Barnes back-gear power-feed drills.
- 1 36" Snyder back-gear power-feed drill, 1/4" revolving table.
- 1 40" New Haven back-gear power-feed drill.
- 1 No. 12 Brown & Sharpe miller.
- 4 No. 3 1/2 Garvin plain back-gear millers.
- 1 No. 15 Garvin plain back-gear miller.
- 1 1/2 Cleve. auto. screw machine.
- 2 1 Cleve. auto. screw machines.
- 7 2 Cleve. auto. screw machines.
- 15" Niles boring mill, one head.

Also large lot of other tools. Send for list.

THE S. M. YORK MCHY. CO.

CLEVELAND, OHIO.

READ THIS!

If you are in the market for a second-hand Boiler and Engine, Steam Pump, Feed-Water Heater, Steam Trap, Dynamos, second-hand Belting, Palleys, Hangers and Shafting, second-hand Steam Pipe, any size or quantity; Wrought Iron Tanks, Smoke Stacks of any kind, kindly communicate with us, as we are in a position to fit you out, and will guarantee perfect satisfaction or refund the money and bear all expenses.

JOHN HENNING & SON,

1016-20 East Susquehanna Ave., Philadelphia, Pa.

FOR SALE.—Engine, 12x16, \$200. Three Traction Engines, 10 and 12-horse, \$300 each. 10 and 12-horse Portable on wheels, \$300 each. Engine Lathe 20" swing, \$150. 16" Speed Lathe, Pratt & Whitney, \$60. Pratt & Whitney Drill Press, \$15. Five Boilers, 56"x18", 20 flues 6". \$300 each. Upright Boilers, engines all sizes. Double Saw Mill, Brownell make, 36" carriage, 3 head blocks, complete, \$350. 35 Engines and Boilers, from 6 to 100-horse, at buyers' prices. D. L. CASEY MACHINE CO., Springfield, Ohio.

MACHINERY.

BOILERS—HORIZONTAL.

(Second-hand.)

- No. B-97—36"x8", 25 3/4" tubes. No. B-106—50"x14", 41 1/4" tubes. No. B-96—30"x25", 30 3/4" tubes. No. B-99—40"x10", 32 3/4" tubes. No. B-105—48"x14", 37 3/4" tubes. No. B-109—54"x15", 64 3/4" tubes. No. B-112—60"x12", 46 3/4" & 2 1/2" tubes. No. B-116—60"x6", 28 3/4" tubes (5). No. B-125—72"x5 1/2", 64 1/4" tubes. No. B-102—60"x12", 70 3/4" tubes. No. B-100—44"x10", 38 3/4" tubes. No. B-113—60"x15", 52 1/4" tubes. No. B-114—60"x10", 54 1/4" tubes. No. B-104—48"x12", 54 3/4" tubes. No. B-98—40"x10", 32 3/4" tubes. No. B-96—54"x12", 71 3/4" tubes. No. B-99—40"x10", 34 3/4" tubes.

BOILERS—VERTICAL.

(Second-hand.)

- No. B-157—42"x60", 109 2 1/2" tubes, submerged. No. B-148—30"x5", 42 2 1/2"x36" tubes. No. B-34—36"x8", 68 2 1/2"x8" tubes. No. B-149—28"x5", 37 2 1/2"x11" tubes. No. B-162—28"x5", 37 2 1/2"x7" tubes. No. B-151—30"x6", 55 2 1/2"x3" tubes, submerged. No. B-150—30"x8", 50 2 1/2"x3" tubes, submerged. No. B-160—30"x6", 37 2 1/2"x4 6" tubes.

(New.)

No. B-144—24"x6", 24 2 1/2"x49" tubes.

PORTABLE BOILERS.

(Second-hand.)

- No. B-131—15 H. P., 24 3/4"x6" tubes. No. B-133—18 H. P., 28 3/4"x5" tubes. All second-hand, in good working order.

ENGINES—HORIZONTAL.

(Second-hand.)

- No. B-1—10"x16". No. B-6—7"x10". No. B-8—1 1/4"x10". No. B-22—9"x18". No. B-27—13"x18". No. B-28—11"x16". No. B-29—1 1/4"x14". No. B-37—12"x20". No. B-40—12"x15". No. B-44—14"x20". No. B-45—5"x6". No. B-46—18"x27", four-valve. No. B-47—4"x8". No. B-2—12"x20". No. B-12—6 1/2"x12". No. B-17—8"x12". No. B-20—10"x12". No. B-16—6"x10". No. B-7—6"x12". No. B-11—8"x12". No. B-21—12"x24". No. B-39—14"x24". No. B-41—7"x10".

(New.)

- No. B-4—6"x8". No. B-9—7 1/2"x7 1/2". No. B-13—5 1/2"x12". No. B-14—8"x10". No. B-23—11"x14". (2). No. B-36—9"x12". No. B-15—10"x14". No. B-31—10"x12". No. B-18—10"x15" (2). No. B-10—8"x10".

ENGINES—VERTICAL.

(Second-hand.)

- No. B-51—4"x5". No. B-52—3"x5". No. B-53—4 1/4"x7". No. B-57—5"x7". No. B-58—5"x6". No. B-59—8 1/2"x5 1/2". No. B-61—5 1/2"x16"x3". No. B-67—8"x8". No. B-68—9"x9" (double). No. B-70—9"x9". No. B-64—6"x6".

(New.)

- No. B-50—3 1/2"x3 1/2". No. B-54—4 1/2"x5 1/2". No. B-55—6"x6". No. B-56—5"x5". No. B-65—7"x7". No. B-49—10"x10". Second-hand engines in good order, and all equipped with usual fixtures.

ENGINES—GASOLINE.

(New)

No. B-89—7 H. P. No. B-90—6 H. P.

AIR COMPRESSORS.

(Second-hand)

- No. B-501—5"x5". No. B-504—9 1/2"x9 1/2"x10". No. B-505—9"x15 1/2"x12". No. B-507—water air compressors (3). No. B-508—water air compressors (2). No. B-509—water air compressors (C). No. B-510—2 1/2"x6 1/2" (double). No. B-500—8"x16"x12". No. B-502—6 1/2"x8 1/2"x6". All in good order.

Write us for any machinery wanted, or if you wish to exchange or sell. To close out the above quickly will make specially low prices for prompt cash.

C. C. Wormer Machinery Co.

24-40 Shelby Street,

DETROIT, MICH.

FOR SALE.

1 Fairbanks Gasoline Engine (30 horse power). This engine is new and complete in every particular, including a 40-gallon galvanized tank, 1 box batteries, fixtures, piping, belting, and an extra 55-gallon galvanized gasoline tank. Will sell at a great bargain. 1 Steam Fire Engine, late from Baltimore department. 4 Hoisting Engines, 12, 15, 18 and 25-horse power respectively. A number of single and duplex Steam Pumps. Cistern, Deck and Deep Well Pumps (new). General machine work and repairing. I make a specialty of repairing Steam Pumps, High-speed and Gasoline Engines.

W. W. KIRK,

406 E. Pratt St., Baltimore, Md.

FOR SALE CHEAP.

One Marine Boiler, 180 H. P. One Erie City Box Bed Engine, 50 H. P. Two Locomotive Boilers, 30 H. P. One 6"x15" Rock Crusher. One ten stamp Frazer & Chalmers Mill. Three Concentrators, one Golden Gate, two Embury. One Frue Vanner. One No. 10 Cameron Pump. One 24" Buhr Mill. One Electric Separator. One Fairbanks Scale, No. 8, 2,000 lbs. capacity. One Pulameter Pump, No. 4. All of the above in good and first-class order. Will make especially low prices to move. Write for particulars.

J. B. KENDALL, Washington, D. C.

PROMPT DELIVERY.

- 1 60"x20" Engine Lathe.
- 1 60"x60"x20" Planer, 2 heads.
- 2 24"x48" Wheelock Engines.
- 2 80 H. P. Ball Engine.
- 1 Dunham 1 1/2" Nut Machine.
- 1 Hot Nut Machine, 1 1/2".

GEO. H. BOWLER,

507-508 Williamson Bldg. CLEVELAND, O.

2 Osgood Dredges

FOR SALE.

Hull 70 x 17 x 6 ft. with 6 x 29 ft. pontoons. 1 1/4 Yard Dipper, Steel Boom, 45 ft.

J. C. SAXTON,

18 Broadway, NEW YORK.

Machinery and Supply Bargains.

We are easily the representative machinery house of America. Our stock is the most extensive to be found anywhere.

All rebuilt motive power that leaves our establishment is in absolutely perfect condition. Our extensive repair shops are replete with every modern facility for correctly turning out second-hand machinery, as good as new for further use.

The Following Items are Offered Subject to Prior Sale:

ENGINES.

- 104. 2 16x24 slide valve.
- 109. 2 8x12 side crank.
- 111. 8x16 right hand, side crank.
- 112. 8x16 left hand, side crank.
- 114. 10x14 link motion, right hand.
- 115. Vertical in case 4x10x14.
- 116. Cross compound 3x16.
- 117. 5x12 right hand, side crank.
- 118. 9x14 left hand, box bed.
- 119. 8x12 center crank.
- 120. 9x10 side crank.
- 121. 8x12 center crank, box bed.
- 122. 6x12 left hand, side crank.
- 123. 5x10 right hand, side crank.
- 001. 6x8x12 center crank, reversible "Tift."
- 002. 7x9x12 center crank, reversible "Tift."
- 143. Davy safety engine and boiler, compound, 8x8.
- 003. 12x20x12 Westinghouse.
- 150. 5x7 Erie City, center crank.
- 151. 6x8 Erie City, center crank.
- 152. 5x7 center crank.
- 153. 6x8 center crank.
- 154. 7x10 side crank.
- 155. 12x24 center crank, heavy bed.
- 156. 7x12 left hand, slide valve.
- 157. 9x12 left hand, slide valve.
- 162. 12x16 left hand and slide valve, extra heavy bed.
- 163. Arlington & Sims cross compound 13x20x15.
- 170. 12 H. P. Kimball automatic.
- 171. 5 H. P. low pressure.
- 172. 3 slide Triumph nickel-plated, 20 H. P.
- 173. 13x14.
- 190. 15 H. P. Kimball automatic.
- 192. New York Safety 11x12.
- 206. 14x24 box bed, slide valve, side crank, right hand.
- 207. 8x18 right hand, side crank.
- 208. 12x24 right hand, side crank.
- 210. 11x10 Westinghouse.
- 212. 11x24 left hand, slide valve.
- 213. 12x24 slide valve, right hand.
- 214. 8x7 Westinghouse "Junior."
- 216. 12x16 box bed, right hand.
- 217. 15x16 Ball automatic, center crank.
- 219. 11x20x14 McEwen tandem compound.
- 047. 22x60 Corliss.
- 062. 11x20x20 Rice automatic.
- 060. 13x34 Putnam Corliss.
- 075. 20x20 Poppet valve.
- 076. 18x26 Nicol-Burr.
- 0297. 8x10 Taylor-Bock automatic.
- 058. 500 H. P. Williams automatic.
- 0313. 18x32 Nordburg.
- 0314. 14x18 Erie City side crank.
- 0318. 13x34 Fitchburg Corliss.
- 029. 25 brand new Climax ant., from 5 to 25 H. P.
- 0192. New York Safety, 14x12.
- 0193. 12x12 Arlington & Sims.

BOILERS.

- 066. 54x8 vertical Heine water-tube boiler.
- 064. 48x12 tubular, no dome.
- 469. 4 54x15, no dome.
- 004. 175 H. P. Heine water tube.
- 005. 120 H. P. Sterling water tube.
- 006. Water boiler, no dome, 54x14, tubular.
- 075. 48x12 tubular, no dome.
- 076. 60x12 vertical fire box.
- 081. 66x12 vertical fire box.
- 086. 66x16 tubular.
- 088. 66x18 tubular.
- 085. 48x10 vertical fire box.
- 702. 48x10 vertical fire box.
- 704. 60x16, no dome, tubular.
- 708. 66x14 tubular.
- 711. Marion fire box, 15 H. P.
- 716. 4 72x20 tubular, no dome.
- 719. 100 H. P. internally fired.
- 580. 15 H. P. water-tube marine boiler.
- 580. 20 H. P. water-tube marine boiler.
- 007. 1 80 H. P. locomotive fire-box boiler.
- 008. 1 100 H. P. locomotive fire-box boiler.
- 009. 50 vertical, from 2 to 20 H. P.
- 010. 20 locomotive fire-box boilers, from 10 to 40 H. P.

PUMPS.

- 011. Worthington compound duplex, 19x16 by 10x10.
- 012. Worthington compound duplex, 18x14 by 8x10.

065. 7 deep-well pumps.

100 pumps, single, duplex and triplex, belt driven and centrifugal.

Write for our list of pumps; it's a very complete one.

GASOLINE ENGINES.

- 013. 2 50 H. P. Ottos.
- 10 1/2 horse-power.
- 12 2 horse-power.
- 5 3 horse-power.
- 6 4 horse-power.
- 4 5 horse-power.
- 1 8 horse-power.
- 1 10 horse-power.
- 1 20 horse-power.
- 2 25 horse-power.
- 051. From 3 to 20 H. P. brand new Dayton horizontal.

AIR COMPRESSORS.

- 064. 25 assorted size air compressors.

OUR COMPLETE LIST ON APPLICATION.

HEATERS.

- 014. Baragwanath 76 H. P., brass tubes.
- 015. Smith-Vaile No. 1.
- 007. 16 inch diameter, 10 feet high.
- 008. Excelsior 20 inch diameter, 7 feet high.
- 009. Pressure heater 18 inch by 10 feet.
- 010. Pressure heater 14x30 inches high.
- 013. Pressure heater 20x3.
- 015. Pressure heater 12 inch diameter, 4 1/2 feet high.
- 021. Excelsior heater 48 inch high by 18 inch diameter.
- 522. 24x12 brass tubes, 400 H. P.
- 561. 18x14.
- 562. Baragwanath 4 inch diameter, 4 1/2 feet.
- 564. National, copper flues, 300 H. P.
- 568. 15x12.
- 095. Excelsior heater 21x4 1/2 ft.
- 571. Baragwanath 75 H. P.
- 575. 16 inch diameter, 6 feet high, automatic regulator.
- 577. Stillwell-Hierce & Smith-Vaile 48 inch by 9 feet.

TANKS.

- 014. 30 inch diameter x 12 inch.
- 490. 30 inch diameter x 42 inch.
- 508. 30 inch diameter x 5 feet.
- 509. 30 inch diameter x 54 inch.
- 510. 48 inch diameter x 7 1/2 feet.
- 491. 42 inch diameter x 12 feet.
- 494. 42 inch diameter x 5 feet.
- 495. 48 inch diameter x 7 1/2 feet.
- 496. 48 inch diameter x 8 feet.
- 500. 36 inch diameter x 5 feet.
- 287. 36 inch diameter, 10 feet long.
- 591. Square tank 36x21x18.

This list represents about one-tenth the number of tanks we have in stock. Write us your wants.

HOISTS.

- 016. Standard-gauge locomotive traveling crane, with boiler, self-propelling, 10-ton capacity.
- 017. Locomotive traveling crane, 5-ton capacity.
- 018. Double cylinder 8x14, 3 drum.
- 019. 10x16 double cylinder double drum Mundy.
- 020. 11x18 double cylinder double drum 3x5 1/2x12 Mundy, Webster, Camp & Lane.
- 021. 2 locomotive fire box, with single drum, single cylinder, hoist attached.
- 022. Marion steam shovel complete.
- 023. Single hoisting engine and boiler, Mundy, on wheels, single drum, single cylinder.
- 024. 2 stationary hoisting engines, single cylinder, single drum.
- 025. Electric hoist, direct-connected.
- 026. 20 brand new hoists of various sizes.
- 027. Double cylinder, single drum electric hoist.

MISCELLANEOUS.

- 165. One 8-inch shaft.
- 028. 20 feet of 5 3/16 inch.
- 029. 50 feet of 4 1/10 inch.
- 030. 2000 feet of 1 1/4-inch wire cable.
- 031. 500 feet of 2 1/4-inch cable.

032. 1000 feet of 2 1/4-inch cable.

033. 1000 feet of 1 1/4-inch galvanized guy rope.

594. Flywheel, solid rim, 10 inch diameter, 10 inch bore, rim 9 inch face.

034. 2 "A" shaped house derricks.

505. 1 round iron kettle 48 inch diameter.

506. 1 steam-jacket kettle 24 inch diameter.

507. 1 steam-jacket kettle 54 inch diameter, 5 feet deep.

512. 1 jacket kettle 54 inch diameter, 4 feet deep.

513. 1 round jacket 58 inch diameter, 48 inch deep.

035. 2 chemical fire engines.

036. 2 Lindgreen chemical fire engines.

037. 300 gate, globe and angle valves, from 10 to 24 inches, screwed and flanged. Write us.

2 mechanical firing fronts for 75 H. P. Heine boilers.

048. Rogers 30-ton locomotive.

049. No. 3 Gates crusher.

050. 44 inch x 6 feet 6 inch rattler.

052. 100 steam traps from 4 to 12 inch diameter.

053. Pratt & Whitney double-spindle drill press.

054. Automatic horizontal boring bar.

055. 2 iron planers, 1 18x18x4 and 1 20x20x6.

056. 2 Raymond crushers and pulverizers.

057. 2 Jones water-wheels, one 24 inches and one 30 inches.

070. 2 wire stretchers.

061. 2 Wells lights, large size.

0221. Hotchkiss hammer.

0339. Set of boiler rolls; will take sheets 38 inches wide.

063. 16 Ingersoll-Sergeant rock drills.

500,000 feet of standard black wrought-iron pipe, from 1/2 to 12 inch diameter.

5 carloads of steel sheets, from 8 to 16 gauge.

All kinds of plumbing material, including bathtubs, lavatories, sinks and closets.

We carry a complete stock of hardware, enclosing such items as horseshoes, horseshoe nails, hammers, hatchets, axes, handles, etc.; also just received 5 carloads of wire nails.

BRAND NEW RUBBER BELTING.

- 450 feet 18 inch 5 ply.
- 100 feet 20 inch 5 ply.
- 250 feet 22 inch 5 ply.
- 100 feet 24 inch 5 ply.
- 52 feet 34 inch 5 ply.
- 135 feet 20 inch 6 ply.
- 30 feet 24 inch 6 ply.
- 37 feet 16 inch 7 ply.
- 30 feet 20 inch 7 ply.
- 30 feet 24 inch 9 ply.
- 118 feet 14 inch 9 ply.

SECOND-HAND LEATHER BELTING, DOUBLE THICK.

- 200 feet 16 inch.
- 100 feet 18 inch.
- 200 feet 19 inch.
- 100 feet 20 inch.
- 100 feet 22 inch.
- 100 feet 24 inch.
- 100 feet 28 inch.

Also in stock all kinds of New Leather Belting, Oak Tanned Short Lap, Single and Double, in all widths.

We handle every conceivable kind of a belt, and guarantee to save you money on anything in the line.

ELECTRICAL.

- 038. 50 light 2000 C. P. Westinghouse arc dynamo.
- 039. 45 light Schuyler arc dynamo.
- 040. 30 light Schuyler arc dynamo.
- 041. Two 50 K. W. compound wound Westinghouse alternators.
- 042. 50 K. W. single phase Westinghouse alternator.
- 043. 20 light brush arc machine.
- 044. 25 H. P. 500 volt railroad motor.
- 045. 60 K. W. Ft. Wayne alternator.

Also in stock all kinds of weatherproof and rubber-covered wire, telephone supplies, telephones, fan motors, annunciators, arc globes and electrical supplies in general.

OUR COMPLETE LIST ON APPLICATION.

OUR CATALOGUE No. 239 contains an itemized and complete list of our stock on hand. It is such a book as every up-to-date merchant and mechanic should have in his possession. It is free for the asking.

Five Long Distance Telephones in our Office, all "Yards 827." Telegraphic information by "Western Union" or "Postal" Code.

Chicago House Wrecking Co.

W. 35th and Iron Streets, CHICAGO.

FOR SALE.
We own about 2000 tons of
60-lb. STEEL RELAYING RAILS
and Angle Splice Bars for same. Will
sell in lots to suit buyer, and subject to
Hunt & Co.'s inspection. Well located
for Southern delivery.
We also handle new or second-hand
light-weight Rails.

ROBINSON & ORR,
419 Wood Street,
Pittsburg, Pa.

ATTENTION!
To Eclipse Machine & Boiler Works
1132-1138 W. 14th Street,
CHICAGO, ILLS.

ICE MACHINES.

One 75-ton, Vilter.
Two 15-ton machines.
One 10-ton machine.

BOILERS.

Vertical, Tubular and Fire-box, all sizes.

ENGINES.

One 10x15 Buckeye, automatic.
One 8x16 Buckeye, automatic.
One 11x15 Bay State, slide valve.
Two 10x16, slide valve.
One 8x12, slide valve.

PUMPS.

One 10x7x10 Smith-Vaile.
One 4x3x3/4 Duplex.
One 4x2x3/4 Dean Duplex.
One No. 5 Knowles.

WOODWORKING MACHINERY.

One 24" Buss Machine Works Planer.
One 20" 3-roll Perry Sander.
One Door Relisher and Wedge Cutter.
One 24" Surfacer, incline bed.
One Double Spindle Shaper.
Write for prices before purchasing elsewhere.

MENGEL'S MACHINERY EXCHANGE,
36 East Balderston Street.
**FOR SALE CHEAP—All sizes STEAM AND
GAS ENGINES, 50-H. P. LOCOMOTIVE, 60-
H. P. HORIZONTAL, 100, 40, 25, 15, 9 AND
4-H. P. VERTICAL BOILERS, 22x30 150-H.
P. FARQUHAR PISTON VALVE ENGINE, 5-
H. P. VERTICAL ENGINE and BOILER com-
bined, 20-H. P. HOISTING ENGINE, OTIS 25-
H. P. STEAM ELEVATOR ENGINE, POWER
WORM GEARED FACTORY ELEVATOR,
TWO REVOLUTION and DRUM CYLINDER
PRESSES, JOB PRINTING PRESSES, all sizes
and makes; complete STEREOTYPE OUTFIT,
48" HOE POWER PAPER CUTTER, Sheridan
Extra Heavy Toggle Joint SMASHING PRESS,
Lot of TYPE, IMPOSING STONES, STANDS
and CASES, large lot of standard makes of
PRINTING INKS at 1/2 price, WOODWORK-
ING MACHINERY, SHAFTING, BELTING,
PULLEYS and HANGERS. Always positive
bargains at MENGEL'S MACHINERY EX-
CHANGE, 26 E. Balderston St., near Light.**

WANTED.

Five to six hundred feet of good
second-hand 8-inch standard pipe and
about two hundred feet of good second-
hand 10 inch standard pipe. It must be
in good condition.

JOSEPH HULL, Savannah, Ga.

ROLLING MILLS.

We have purchased the entire plant of the Iron
Gate Rolling Mill in Virginia, and will have for
sale some first-class second-hand Mill Machinery,
including Shears, Trains of Rolls, Engines, Boilers,
etc., etc. If you are in the market for any of this
equipment, let us know your wants.

POULTERER & CO.

410 Bullitt Building, PHILADELPHIA, PA.

**FOR SALE OR EXCHANGE—BOILERS,
PUMPS, ENGINES, Etc.** 2 80-h.-p. Bab-
cock & Wilcox water tube Boilers. A large as-
sortment of tubular and fire-box Boilers, Corliss,
Slide Valve and Upright Engines, Single and
Duplex Steam Pumps, Feed Water Heaters, etc.
Goods constantly listed with us. All goods guar-
anteed as represented. Send for stock list and
let us know your wants, and we will supply you.
H. MODERS CO., 2d & Sycamore Sts., Milwaukee, Wis.
Steam Fitting and Machine Shop.

FOR SALE.

Can Ice Making Machinery,

INSTALLED BY
YORK MANUFACTURING CO.,
(60 Ton Daily Capacity)

complete with 2 Compound Compressors, 30 ton
each. Distilling Tanks, Receivers, Boilers, all
Piping, Dynamo and Engine for Electric Light-
ing and Driving Travelling Cranes for handling
cans. About 1500 cans, used 2 years, and can be
bought right, either to be used on premises or
removed. For full particulars, address,

S. T. LUND,

120 High Street, BOSTON, MASS.

Second-Hand MACHINERY

For Immediate Delivery.

- 1 36 in.x36 in.x9 ft. Sellers Planer, 1 head.
- 1 36 in.x36 in.x7 ft. Sellers Planer, 1 head.
- 1 30 in.x30 in.x10 ft. P. & W. Planer.
- 1 32 in.x32 in.x10 ft. P. & W. Planer.
- 1 3 Spindle Jones & Lamson Drill Press.
- 1 6 Spindle Nut Tapper, 1/2 in.
- 1 10 in. New Haven Shaper.
- 1 Bement Traverse Shaper, 60 in. table, 14 in. Stroke.
- 1 Bement Traverse Shaper, 72 in. table, 12 in. Stroke.
- 1 No. 1 Brainard Universal Milling Machine.
- 1 No. 4 Lodge & Davis Universal Milling Machine.
- 1 Portable Air Compressor, motor driven.
- 1 No. 7 Long & Allstatter Punch.
- 1 20 in.x21 ft. Johnson Engine Lathe.
- 1 46 in.x24 ft. Engine Lathe.
- 1 48 in.x24 ft. Engine Lathe, triple geared
- 1 14 in.x6 ft. Blaisdell Engine Lathe.
- 1 16 in.x8 ft. Blaisdell Engine Lathe.
- 1 24 in. Gisholt Turret Lathe.
- 1 28 in. Gisholt Turret Lathe. (New.)
- 1 60 in. Heavy Radial Drill, 5 in. spindle.
- 1 42 in. Betts Radial Drill.
- 1 3 in. National Bolt Cutter.

U. Baird Machinery Co.

123-125 Water Street,
PITTSBURG, PA.

FOR SALE. Wood-Working Machinery

of the most improved
patterns at reasonable
prices. Send for list
of 150 machines.

G. W. Willebrands,
50 Jefferson Ave. Detroit, Mich.

FOR SALE.

One practically new 20x42 Harris-Corliss En-
gine, price \$1800; one Erie-Ball Engine, 13x12,
perfect order, \$600; one Ideal Engine, 13x12, \$650;
one 12x30 Harris-Corliss Engine, nearly new, run
one year, \$700; one 12x36 Corliss Engine, \$700;
one 26x48 four-valve Engine complete, in good
order, \$1000; one 18x48 four-valve Engine com-
plete, \$800; one 24x48 Automatic Wright Engine,
\$800; two Manning Boilers, 150 H. P. each, good
for 120 lbs. of steam, \$600 each; one Boiler, 66"
diam. 16' long, horizontal tubular, 100 H. P., 3 3/4"
tubes, run two years, all complete, \$350, warrant-
ed 90 to 100 lbs. steam, as good as new.

F. H. DAVIS & CO.

53 State Street, BOSTON, MASS.

FOR SALE CHEAP.

Two First-Class Engines
Fifty (50) Horse Power each. Both in good con-
dition. Manufactured by Talbot & Sons. Each
engine on continuous test has shown over seventy-
five h. p. For particulars, address
RICHMOND MICA CO., 323 S. 9th St., Richmond, Va.

PARTIAL LIST OF SECOND-HAND MACHINERY.

- 2 120-h. p. 60"x18" Tubular Boilers.
- 1 80-h. p. 60"x18"
- 1 60-h. p. 61"x14"
- 1 100-h. p. 12x12 Ball Automatic Engine.
- 2 16x12x10 Worthington Duplex Pumps.
- 2 34 Exhaust Fans.
- 1 60-h. p. 10x12 N. Y. Safety Power Automatic Engine.
- 1 80-h. p. 12x20 Baker Automatic Engine.
- 1 13 1/2 x 10 1/2 Smith-Vaile Single Pump.
- 1 12-in. Centrifugal Wrecking Pump with Direct Connected Engine.
- Also a large number of smaller Engines, Boilers, Pumps, Heaters, etc.

RAINIER & WILLIAMS,

63 S. Canal St., CHICAGO, ILL.

Engine Bargains

- 100 h. p. 12x24 Buckeye Automatic.
- 100 h. p. 12x20 Rice Automatic.
- 150 h. p. 16x42 Fraser & Chalmers Corliss.
- 150 h. p. 14x30 Cummer 4 valve Automatic.
- 250 h. p. 12x22x18 Payne Tandem Cpd. Auto.
- 65 h. p. 12x24 Cooper Slide Valve.
- 50 h. p. 12x18 Slide Valve.
- 14x7x10 Smith-Vaile Fire Pump.
- 200 h. p. Baragwanath Heater.
- 45 h. p. 11 1/2 x 18 Slide Valve.
- 60x16 ft. Tubular Boiler.
- 200 h. p. Stillwell-Bierce Heater.

The above are all in first-class condition and ready for shipment.

A. L. DAWSON & CO.,

27-31 W. Washington St., CHICAGO, ILL.

Second-Hand Machinery

**For Immediate Delivery
at Bargain Prices.**

- 1 T. H. 110 volt Generator, 50 K. W., perfect order, \$450.00.
- 1 T. H. 110 volt Generator, 30 K. W., perfect order, \$270.00.
- 1 Buffalo Steam Pump Co's Compound Duplex Pump, size 12 and 18 1/2 by 10 1/2 by 12, perfect order, \$600.00.
- Corliss Automatic Slide Valve Engines, Boilers, Pumps, Heaters, Iron and Woodworking Tools.

WISCONSIN MACHINERY CO.

125-127 W. Water Street, Milwaukee, Wis.

Contractors' Outfit

FOR SALE.

- 1 1000-ft., 1 1/2-in. Sherman Cableway, with Lam-
bert engine, complete.
- Stiff Leg, Guy and Breast Derricks, hand and
steam power.
- Traveling Derrick, Byer's.
- Concrete Mixer, power.
- Horizontal Boiler, 40 H. P.
- "New Ingersoll" Drills E 9, new and second-
hand.
- Pile Driver, Bucyrus Dredge.
- Austin "New Era" Graders and Dump Wagons,
slightly used
- Wheel and Drag Scrapers, used less than one
month.
- Horse and Mule Harness.
- Pipe Fitting and Machine Shop Outfit.
- Plows, Shovels, Small Tools, etc.

Machinery located at Trenton Falls, N. Y.;
Rome, N. Y., and Wyoming, Ill.

For particulars, enquire of

The Warren-Burnham Co.,

81 Fulton St., New York City.

New and Second-Hand

Iron Tools and Woodworking Machinery

Corliss and Double Valve Engines for Trolley
Roads and Electric Lighting Stations.

H. C. BAKER & CO.,

114 N. 3d Street, Philadelphia, Pa.

FOR SALE.

One 14 in.x30 in. R. H. new Corliss Engine (our
own build) with 10 ft. diam. wheel 17 in. face in
halves; complete, quick delivery and low price.
Address

KEYSTONE ENGINE & MACHINE WORKS,
5th and Buttonwood Sts., Philadelphia.

R. S. ARMSTRONG & BRO.

ATLANTA, GA.

Iron Brokers.

And Dealers in both New and Second-hand Iron
and Woodworking Machinery. Send for list.

FOR SALE at Attractive Price,

**6,000 ft. of 12-in. Cast Iron
Water Pipe,**

Has been used once. Address

D. H. LOPEZ, Beaufort, S. C.

FEED- WATER HEATERS

2nd-Hand 80, 160 and 250 h. p. Berry-
mans, 200 h.p. Goubert, 150 and 600 h. p.
Wainwrights, 500 h.p. National, 600 h.p.
Stillwell-Bierce Open Heater. All guar-
anteed. **F. L. PATTERSON, Havemeyer Bld'g, N. Y.**

FOR QUICK DELIVERY.
18", 22", 24", 26", 28", 30",
32" and 36" Lathes. Any length.

SCHUMACHER & BOYE,
Cincinnati, O.

A NEAT PLANT!

10 H. P. Gasoline Engine.
125-Light Sprague Dynamo.

In daily operation. CHEAP FOR CASH.
Suitable for Factory or Private
Dwelling.

McCAY ENGINEERING CO.

107 E. Baltimore St., BALTIMORE, MD.

FOR SALE.

Boiler Bargains.

- 3 125 H. P. 72"x16', 76 4" tubes.
- 1 Double Deck Hor. Boiler, 60"x14', with
steam drum 48"x15', 74 3" tubes.
- 1 80 H. P., 60" diam., 16' long, 49 4"
tubes. All above good for 90 lbs. or
more.
- 10 Hughes Duplex Steam Pumps, 4" suc-
tion, 3" discharge; in fine working
order.

Cheap to quick buyers. Large line
of Vertical and Horizontal Boilers and
Engines and Machinery of all kinds.

J. D. MALLORY,

22 Light Street, Baltimore, Md.

Woodworking Machinery.

One 32" Wood Turning Lathe. One 32"
x2' Wood Lathe. One Smith Tenoning
Machine. One McNish & Butler Te-
noning Machine. One three-sided 8" Mould-
ing Machine. Three 8" Outside Moulding
Machines. One Fay Single Stem Shaper.
One Walker Two-sided Panel Raiser. One
24" Single Surfacer, Planer and Matcher.
One Foot-power Miterer. Two Jig Saws.
One 6' Hand Saw. One Saw Table, takes
18" saw. One Single Saw Arbor, 17" long.

CARLIN MACHINERY & SUPPLY CO.,

Lacock and Sandusky Sts., Allegheny, Pa.

For Sale at a Bargain.

LOCOMOTIVES—3 standard gauge locomotives
with tenders; 2 with 16x24 cylinders; 1 with
18 1/2 x 24 cylinder. 1 42" gauge H. K. Porter
saddle tank locomotive, cylinder 9x14".
STEAM SHOVELS—1 Marion, style "A", with
1 1/2 yd. dipper. 1 Osgood with 3/4 yd. dipper.
ENGINES—1 20x40x36 Wright Corliss tandem
compound engine. 1 18 1/2 x 34 1/2 Fitchburg tan-
dem compound engine. Also several others of
different styles and horse power.
PUMP—1 Worthington compound duplex steam
pump, No. 20, 689; size 12x18 1/2 x 10 1/2 x 10.
HOISTERS—1 pair of 14x24 link motion mine
hoisting engines. Also several others.
The above can all be seen at our yards in
Newark, N. J. Correspondence solicited.

GRANT & WILLIAMS,

Park Row Building, NEW YORK.

FOR SALE.

Bar Mill, complete with muck and finishing rolls.
12"x16"x18" Cross Compound Boiler Engine, in
first-class condition.
Also Buy and Sell Relaying Rails, Locomotives
and Cars.

JUSTICE COX, Jr. & CO., Limited,
652-554 Bullitt Building, Philadelphia, Pa.

FOR SALE . . .

- One 20"x48" Engine.
- One 18"x26" engine.
- One 12"x10" Engine
- One 10"x14" engine.
- One 60"x18" Tubular Boiler.
- One 60"x16" Tubular Boiler.
- One Wilkins Steam Gang.
- Two Band Mills.

ROBERT EASTON, Williamsport, Pa.

For Sale Cheap.

One new Ammonia Compressor with 4x4 cylin-
ders, driven by a 6x6 vertical engine, all complete
on a cast iron base 2 ft. wide by 4 1/2 ft. long, self
contained. Address

KEYSTONE ENGINE & MACHINE WORKS,
5th and Buttonwood Sts., Philadelphia, Pa.

2D-HAND BERRYMAN HEATERS,

all sizes. Taken in trade for our Improved
Berryman. In perfect order. Tested and
guaranteed. Prices reasonable. **BENJ. F.
KELLEY & SON, Makers, 91 Liberty St., N. Y.**

FOR SALE CHEAP.

No. 6 Root Pressure Blower, with iron impellers, in good condition.
No. 6 Sturtevant Steel Pressure Blower.

A. ASHER, 123 Liberty St., cor. Greenwich,
NEW YORK.

John A. Waters & Co.

13-17 1/2 S. Eighth Street,
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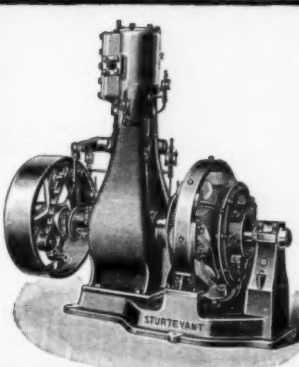
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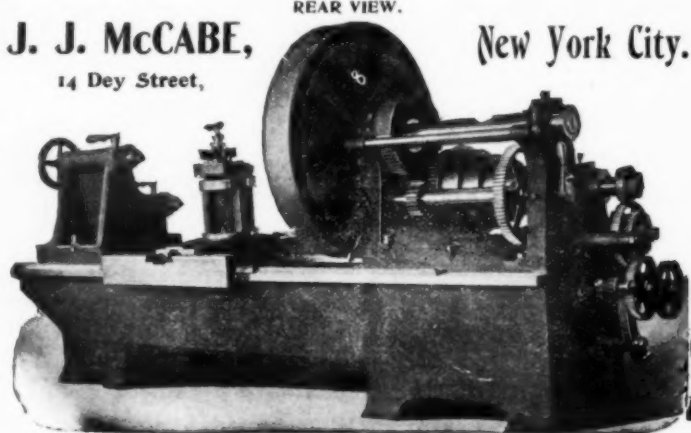
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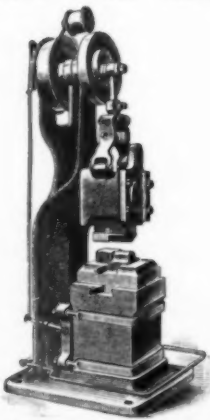
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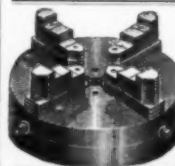
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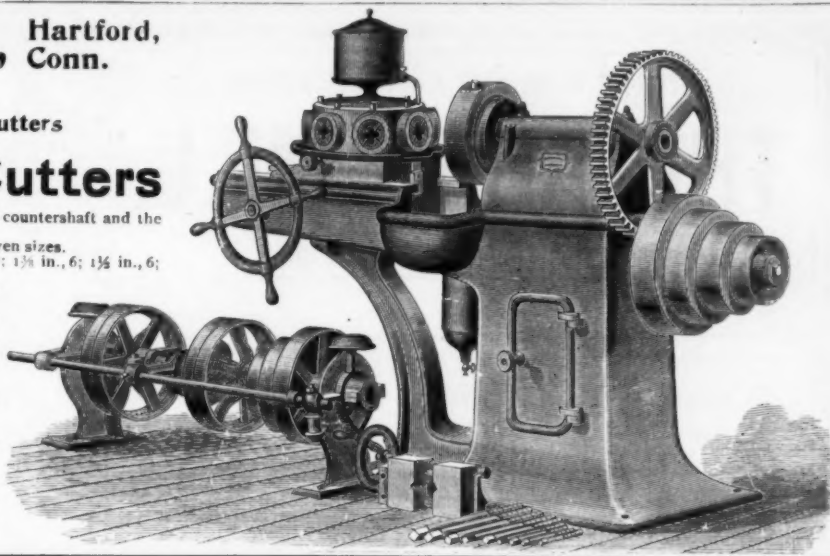
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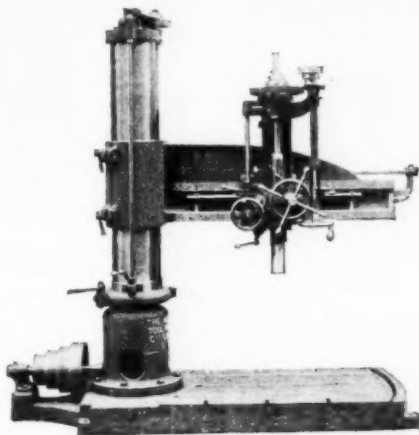
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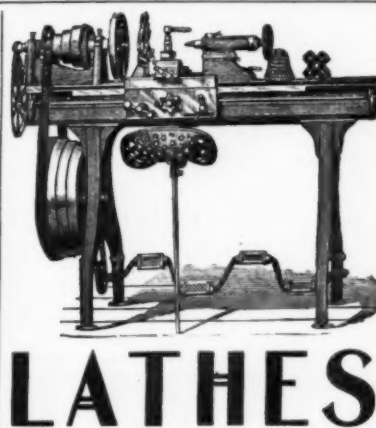


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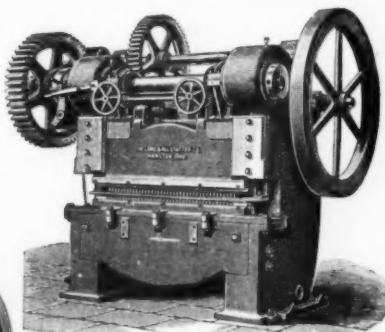
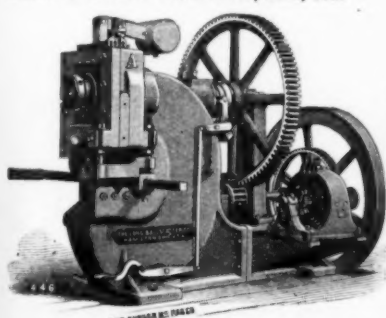
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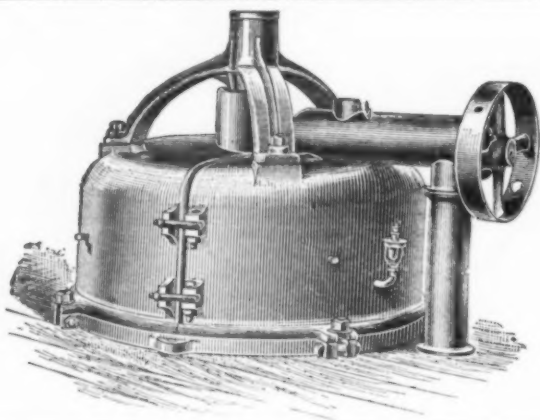
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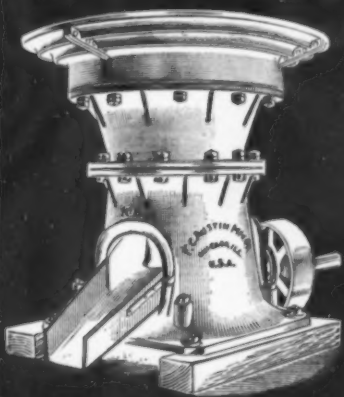
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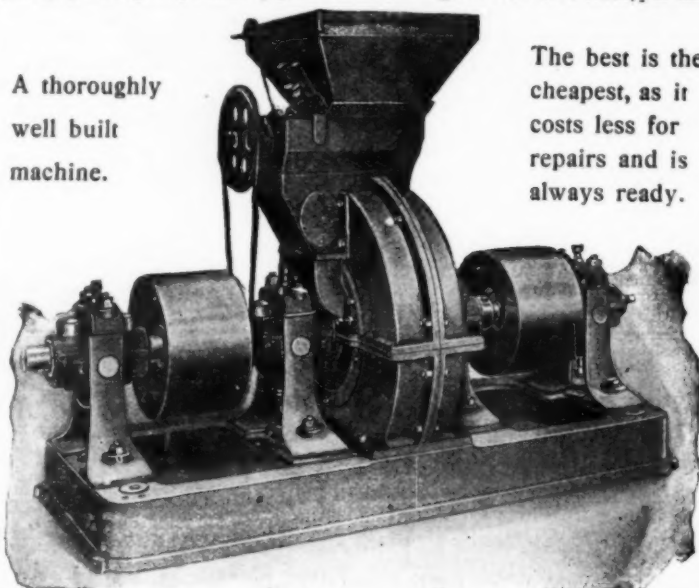
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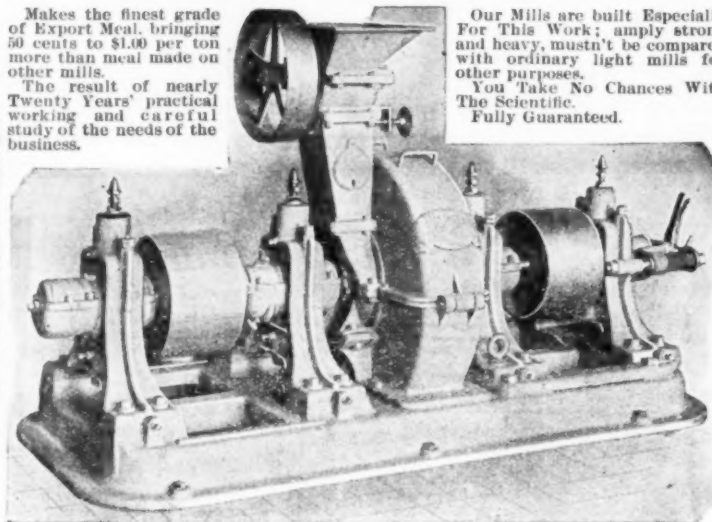
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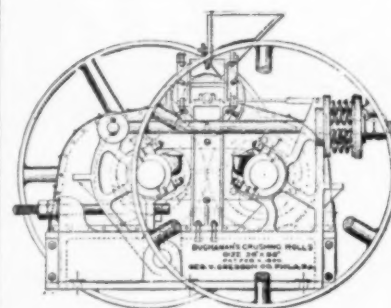
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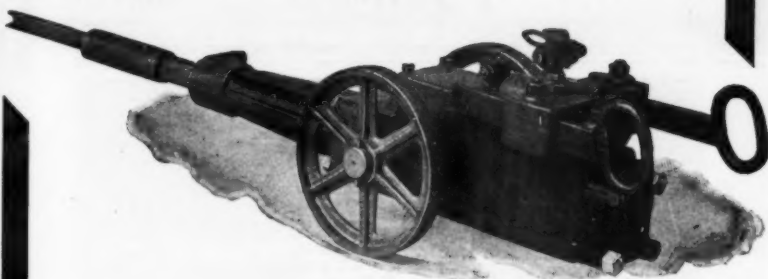
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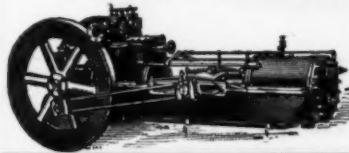
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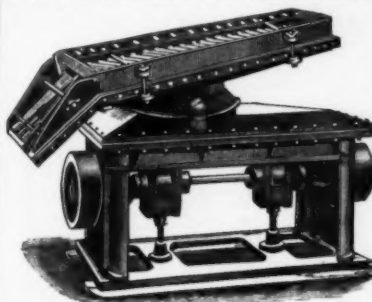
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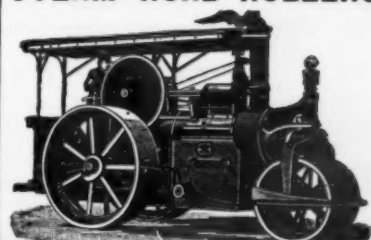
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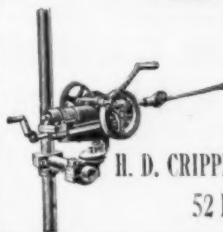
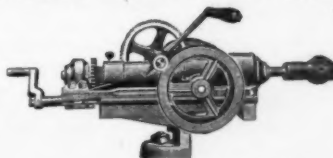
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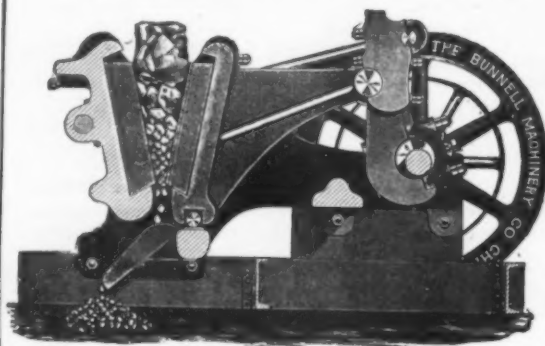
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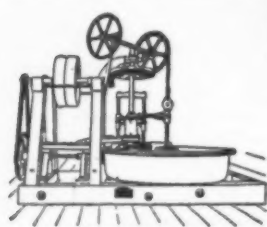
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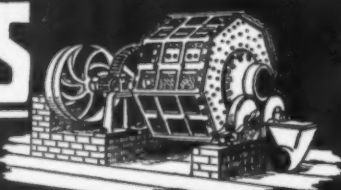
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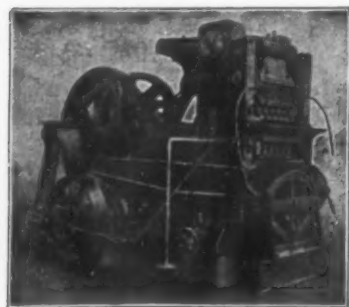
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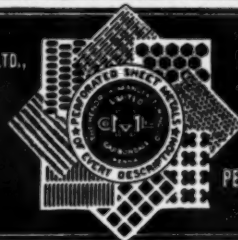
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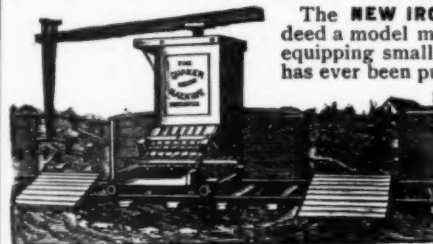
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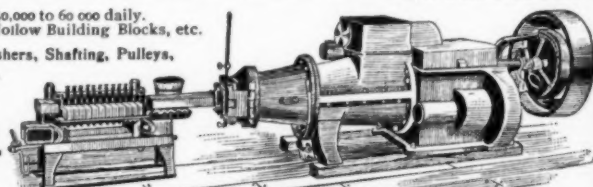
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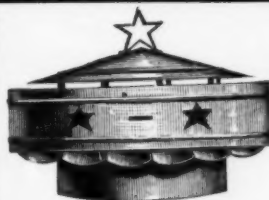
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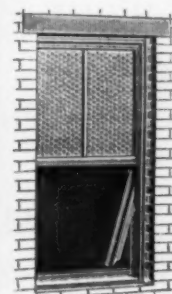
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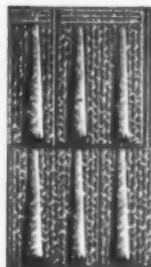
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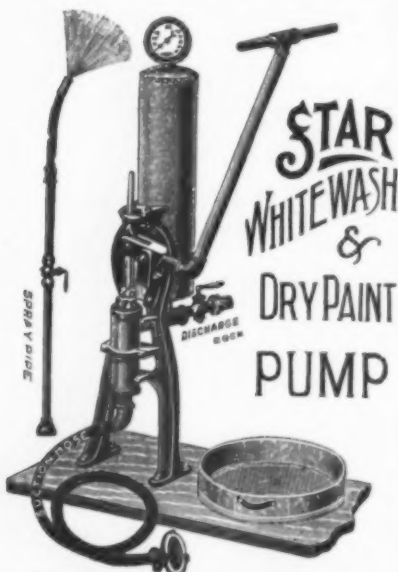
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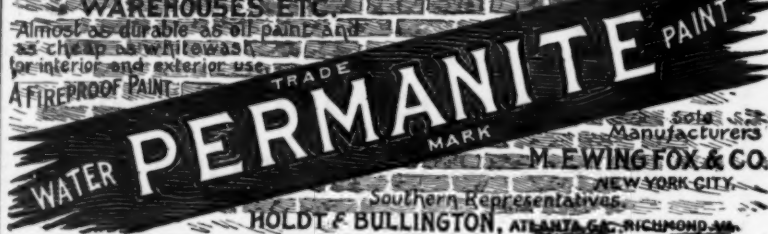
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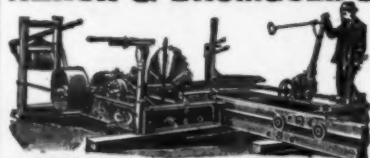
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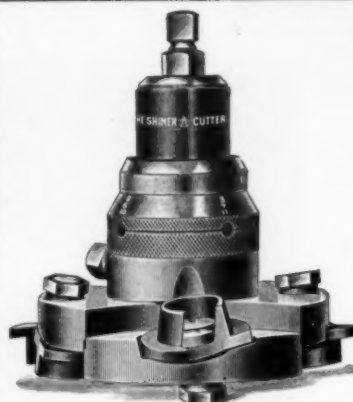
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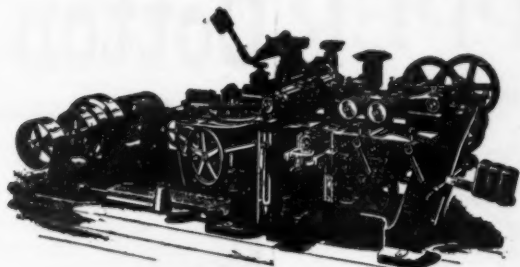
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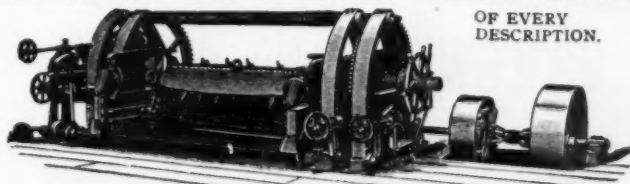
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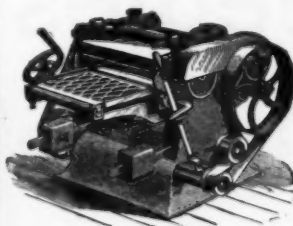
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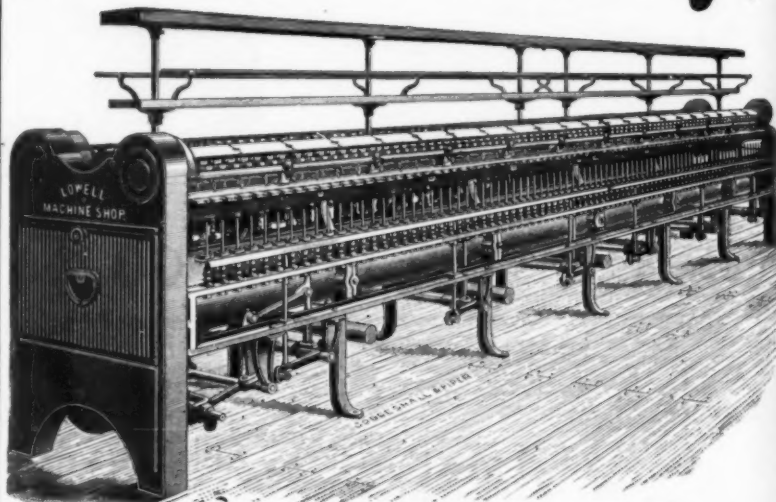
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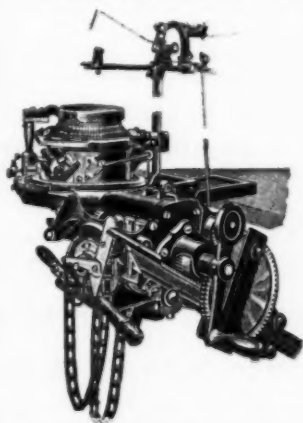
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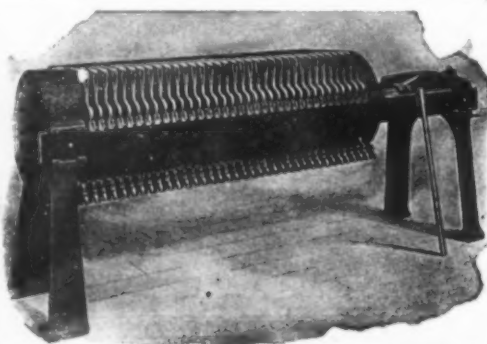
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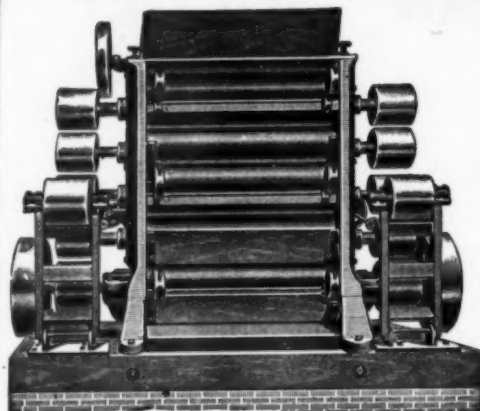
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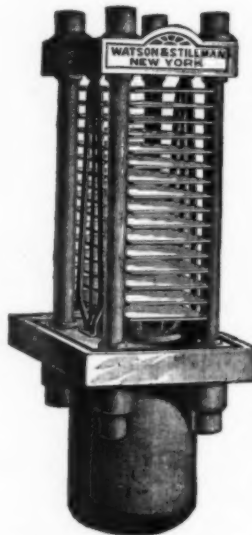
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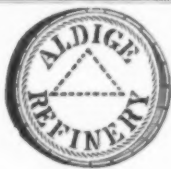
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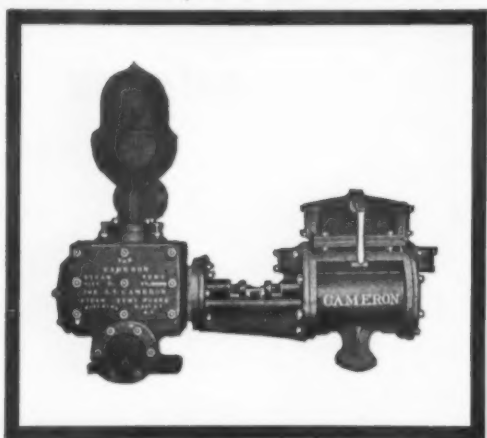
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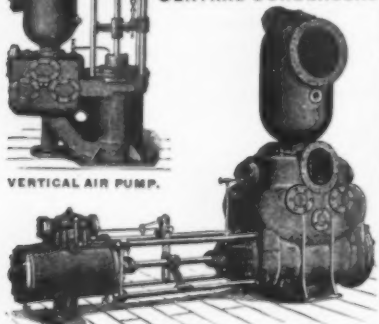
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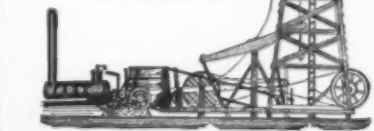
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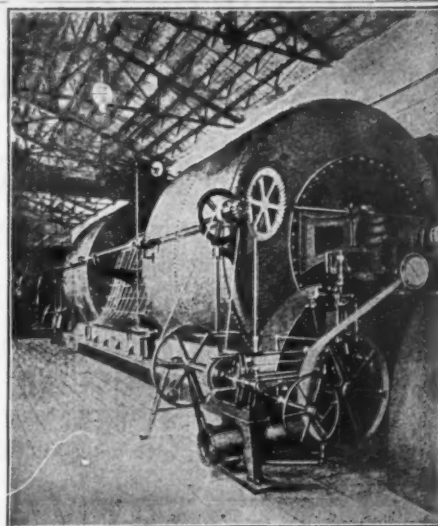
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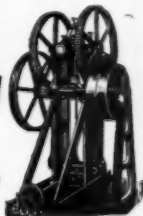
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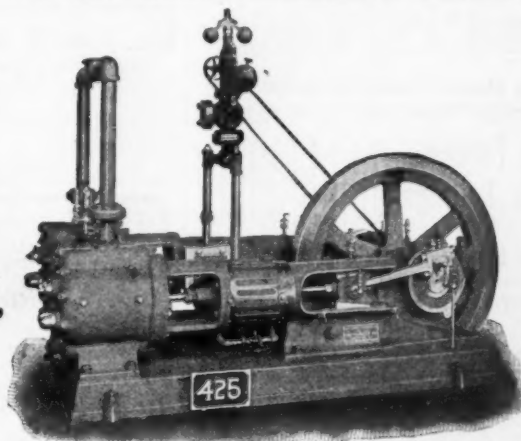
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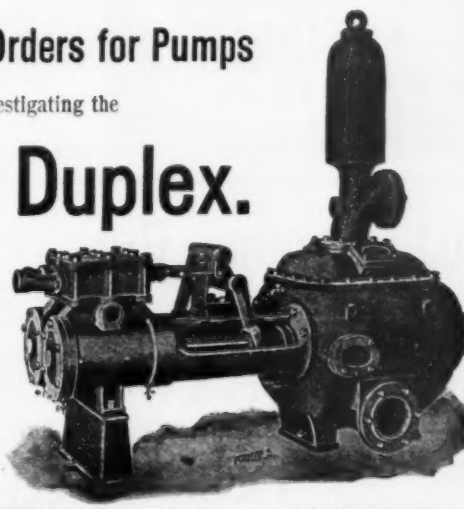
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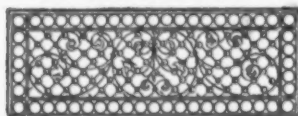
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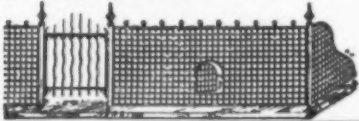
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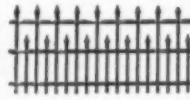
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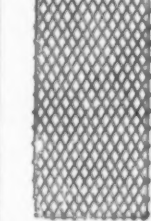
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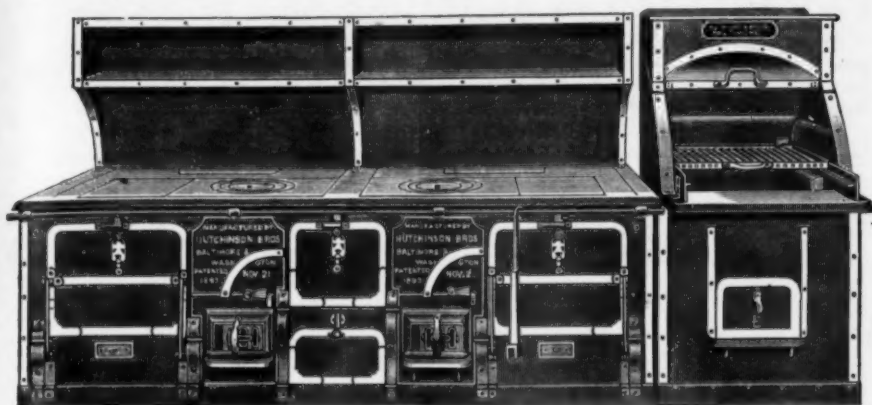
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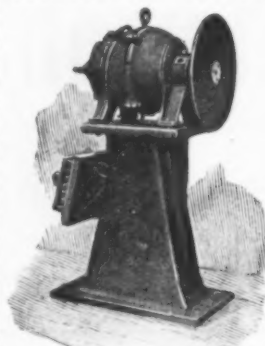
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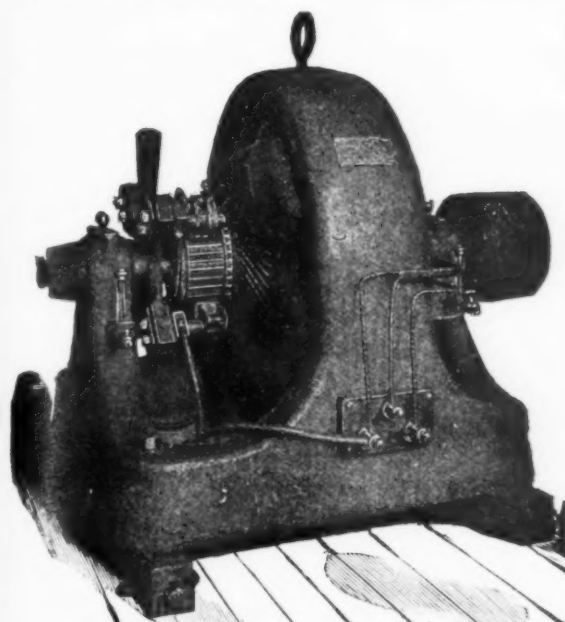
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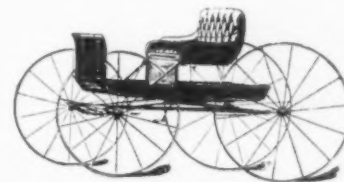
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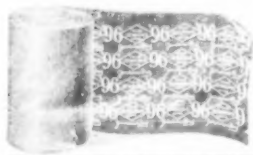
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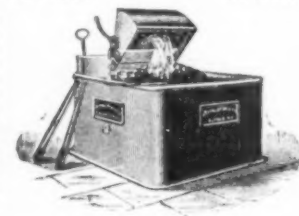
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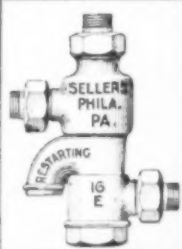
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